THE ROAD TO DEVELOPMENT IS PAVED WITH GOOD INSTITUTIONS:
THE POLITICAL AND ECONOMIC IMPLICATIONS
OF FINANCIAL MARKETS
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This research seeks to identify the factors that account for the variation in development levels across nations by focusing on the institutional components of development, especially the effects of financial market development on economic and political development.

I argue that financial market institutions are critical to economic and political development, and provide a partial explanation for the variation in development observed across nations. Financial market development affects political development indirectly through greater economic efficiency and growth and directly by reducing poverty, increasing economic equality, strengthening the middle class and increasing political participation. Increased financial market development also produces more efficient institutions and eliminates certain perverse incentives in government that result in corruption.

The action mechanisms rest largely on the idea that increasing access to financial services allows the lower and middle-income segments of society to smooth their income and invest in high return activities that can lift people out of poverty. These improvements distribute both economic and intellectual resources throughout society and provide greater opportunities for political entrepreneurship from all societal groups. This, along with greater ability to participate either through monetary means or greater time, increases political participation and democratic development.
Using a variety of econometric techniques to analyze data on 190 countries over 28 years (1975-2003), I show that financial market development has a significant effect in several areas of development. Specifically, I find that financial market development reduces poverty and income inequality and reduces the level of corruption. Increasing financial market development also increases political competition and civil rights protection in addition to increasing the effectiveness of government and regulatory levels.

Ultimately, I assert that while financial market factors have not been previously targeted as sources for development, they may provide an effective policy tool for fostering equitable development in a variety of economic and political situations. I further argue that the state must have a greater role in development than the prevailing neoliberal paradigm prescribes, and must actively seek to develop institutions that support financial market development.
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CHAPTER 1
THE ROAD TO DEVELOPMENT

Introduction

At the time I wrote this introduction, I was sitting in the international transfer lounge trying to decipher whether coffee was a good idea. According to my watch, it was 9:30 in the morning, but my body was arguing that it was closer to midnight. As I blearily looked out the window, the airplanes rearranged themselves on the tarmac. In the distance, the Sydney skyline brightened with the morning sun.

This was arguably an odd time to think of equity and development. Yet all the bustle of activity around me, the teeming skyscrapers and the stacked shipping containers, stood in stark contrast to the harsh reality of existence for the vast majority of the world’s population. How could such a tall, graceful financial district co-exist with teeming slums and opportunities cut short by circumstance? In the international departure lounge, the sky is literally the limit. Yet for many, poverty and oppression keeps billions of people firmly rooted to the ground.

Why is a country like Australia, located in the southern hemisphere, not considered a “Global South” country where poverty, underdevelopment, and governmental malaise are defining characteristics? Why do we see such tremendous variation in development levels around the world, even when resources, geography or governments are similar?

Unlike real estate prices, the answer to this puzzle obviously does not lie in “location, location, location.” So what things do provide us with answers? Where do we look for solutions? Developing theories that provide answers are important, but we also
need concrete solutions to alleviate the problem. This research attempts to address the age-old question of why developmental discrepancies exist in seemingly similar nations by examining the institutional components of development. More specifically, I examine the effects of financial market development on political and economic development.

Research Motivation

In the decades following World War II, colonialism collapsed, communism spread and eventually fell, interventionist and protectionist economic policies dominated much of the developing world only to be replaced by trade liberalization, cultural homogenization, and the rise of a variety of non-governmental, non-state actors and the accompanying shifts in international power. These decades were also a period of increasing democratization across the world. Nation after nation began to reject its authoritarian past and enter into the society of democratic countries. Some of these were more successful than others, and were able to implement a democratic regime with a minimal amount of adjustment and instability. Others remained mired in years of political and economic stagnation.

There is no easy answer to why some nations develop and others do not. In addition, there are hard choices associated with development policy. Almost all the options involve some human cost. As such, development has both an academic component, but also a moral one. As humans first, and scholars second, there is an obligation to understand the institutional arrangements that might foster development in the broadest sense of the word. The Covenants on Human Rights include both political rights, and economic rights. If both political rights and economic rights are grouped
together as human rights, why then do we separate the two disciplines as if they can exist independently?

Academic research on economic and political development topics are often conducted in isolation from one another. This seems unnatural and incomplete. In past centuries, and in the time of Ricardo, political economy was seen as a unified discipline (Ricardo 1817). More recent development strategies have often failed to appreciate these ties, even while prescribing a particular role of the state in abstract. In my opinion, a reunion of political and economic theory is in order, and the state needs to be viewed not as an unwelcome guest but rather the host of the development party.

This research is motivated in part by the moral questions associated with development, and by the intellectual desire to understand more thoroughly the process and consequences of development. Occasionally, we forget that the research conducted and the ensuing policies enacted affect the lives and well-being of individuals. At the end of the analysis, those cold development statistics represent actual human beings and their life chances. Ultimately, this research project seeks to explain some of the variation in development. In order to do so, I will draw upon theories and scholarship from both economics and political science to conduct an inquiry that I hope will contribute to a unified body of knowledge and to provide some policy suggestions and guidance for a future research agenda.

Why Does Finance Matter?

Financial markets are the gatekeepers of international capital flows. They have been blamed for creating economic and political crises, such as the Asian financial crisis, and vilified for wiping out the savings of nations in Latin America. Yet most of the
international financial institutions have paid little attention to the consequences of financial market policy and instead focused on the neoliberal mantra of macroeconomic stability, namely controlling inflation. Financial market policy played a relatively scant role in most structural adjustment programs despite the insistence of the Washington Consensus that economies must liberalize. This shifted a huge burden to the financial systems of developing nations that had to cope with the capital flows and their accompanying fluctuations.

There was also precious little attention paid to the political consequences of these policies. Opposition sprang up in response to required public sector cuts, the removal of fuel and food subsidies, and cuts to education and public health budgets. In some cases, nations like Argentina chose to forego international assistance rather than subject themselves to the potentially destabilizing effects of structural adjustment programs. After two decades of neo-liberal policies, it is time to re-evaluate the approach to development. The major international financial institutions are receptive to a change in tactics, but there is not enough research to define a new path. There is considerable interest in the role that the state and various government institutions play in development, but the literature barely skims the effects of particular institutions. In short, a new research agenda is needed to guide development policy.

Much recent research focuses on institutions (North 1981, 1990; Rodrik 2006; Woodruff 2006). While we certainly recognize the importance of institutions (as many scholars have observed), we still do not completely understand how they work. Nor do we know which institutions have the greatest effect. This research is an effort to focus on one particular type of institution, the financial market system, to see specifically how
it affects political and economic development, and how it might be modified to create higher and more sustainable levels of development.

Theoretical Orientation of the Research

The term “development” has many different connotations and its meaning can alter considerably, depending on the context in which it is used. I take a broad view of development, and define it as an improvement of the living conditions of a given population. This differs from many economic definitions, which tend to consider economic growth as the sole or most important measure of development. In contrast, I believe that the human condition should be considered in any definition of development, not only for ethical reasons, but also for theoretical ones because of the links between broad improvements in the standard of living and political instability (Huntington 1968, 1992; Olson 1982).

Development studies have experienced periodic sea changes in thinking. Most recently, neoliberalism has been the prevailing theory guiding development. Neoliberalism is somewhat styled after the classical liberalism that prevailed in the late nineteenth century, and is a reaction to the more interventionist Keynesian-style approach prevalent after World War I and the Great Depression and to the dependency theories advocated by some thinkers in the 1950s. Neoliberalism strongly focuses on macroeconomic stability, and holds that if economic growth occurs, everything else will follow. By simply focusing on getting the macroeconomic fundamentals right, it assumes that development will follow, including the requisite political structures. Neoliberalism overlooks politics and the consequences of economic policy because they are irrelevant to economic growth.
I argue that there can be no “civil divorce” between politics and economics, and that good policy is the first to suffer from their separation. While I am critical of this virtually apolitical approach of neoliberal thinking, I nevertheless believe that the market is one of the best ways to allocate resources. However, the state can, and must, have a leading role in developing market institutions. I envision a shift for the role of the state from an incapable impediment to progress as the neoliberals characterize it, to a proactive force for market growth and overall development. Markets are an inherently political institution, and must be characterized as such.

My argument draws from both neoliberal theory and dependency theory to explain variation in development, and to detect and prescribe policies that might improve political and economic development. It is essentially a statist argument with roots in the Keynesian critique of neoclassical economics: the idea that the market mechanism can falter, and that it is government’s role to prevent and correct market problems. The state has an inherent responsibility to protect its citizens.

As in more statist approaches, I provide an active role for the state in national development. Unlike purely statist solutions, however, I contend that the state should work to develop institutions that actively support private market development. This occurs by developing strong institutions in the areas of property rights, contract law, enforcement, and the rule of law. None of this is particularly unusual, as this has been prescribed by all shades of development theory. However, this must be coupled with actively implemented controls on market forces until the political and economic systems are capable of handling the shocks that occur within the international financial market without undo disruption to the nation and its population. In other words, the state has a
role of “nurturer,” almost as a parent who guards its offspring until it is capable of fending for itself. This nurturing is accomplished by developing solid institutions, as mentioned above, but also by ensuring that the resulting development is equitable. In contrast to heavily statist prescriptions, or socialist ideals, I contend that equitable development can be accomplished through market mechanisms that are tempered by active government intervention. The question then becomes “which institutions are more effective and where should governments concentrate limited resources?”

A complete examination of development would likely result in a lifetime of work. While the promotion of overall development is the end goal, this dissertation will primarily attempt to explain political development. I argue that variation in political development can be explained by the structure of domestic institutions. Specifically, I posit that the financial market system of a nation is critical to its economic and political development and thus can provide an explanation for the various levels of development among nations.

Financial markets have been shown to have a significant effect on the economic development of a nation, and economic performance often has serious political implications. Financial markets are also the target for many reforms advocated by the international financial institutions as well as national governments. These policies are also the subject of intense interest by foreign investors and policymakers. States and markets have a special relationship in that the financial system must operate under a nation’s laws and are subject to national jurisdiction. Governments can regulate financial activity, the players, and the scope of activity. Given this relationship, any
serious research must take into consideration the role of the state if it is to have any hope of providing policy advice.

The financial system is a large bundle of public and private institutions that serves four major functions: they provide a system of payments, mobilize savings and facilitate investment, diversify risk and provide a degree of supervision over firms. All of these functions work to reduce the costs associated with a transaction.

Financial market development affects political development both indirectly through greater economic efficiency and growth, but also indirectly by reducing poverty, increasing economic equality, strengthening the middle class and increasing political participation. I also contend that better financial market development also results in more efficient institutions and eliminates some of the perverse incentives in government that result in corruption.

Development is accomplished through a variety of mechanisms, but this research suggests that increasing access to financial services allows the middle and lower income segments of society to smooth their income and invest in high return activities (such as education or business equipment) that can lift people out of poverty. These improvements distribute both economic and intellectual resources throughout society and provide greater opportunities for political entrepreneurship from all societal groups. This, along with greater ability to participate either through monetary means, or through increased time, increases political participation and democratic development.

Finally, better financial markets eliminate the uncertainty and murkiness under which corruption thrives. A key element to financial development is the accountability
and transparency of market activities that may reduce the level of patronage that lawmakers and other individuals may succumb to.

Like most, this theory and our ability to test it, suffer from two main problems. First, the endogenous nature of institutions makes it difficult to discern the direction of development (i.e. whether financial market development is driving political development or vice versa). Second, the benefits of financial market development are also likely to be non-linear, with the effects levelling off after a certain point. The quantitative tests of this theory takes these concerns into account and mitigates (but not completely eliminates) some of these concerns.

Description of Contents

Chapter 2 begins with an overview of the history of development studies, and nests the research question within the broader context of development research. It provides my theoretical approach to development, and gives a broad explanation for the variation in development levels around the globe. This serves as the background for the more specific theoretical arguments presented and tested in the subsequent chapters.

Chapter 3 narrows the focus of the research from “why do we see different development levels?” to “what particular institutions have the greatest effect?” I describe in detail the mechanisms by which financial market development affect political and economic development, and provide a justification for the focus on financial markets. In this chapter, I provide the conceptual definitions for the variables, and derive a series of hypotheses from the theory.

Chapter 4 begins the empirical section of this dissertation. The variables are defined operationally, and construction of the dataset is described and discussed. Data
cover 190 countries for the years 1975-2003 and include all countries where data were available. In this chapter, I also discuss the methods of analysis and the diagnostics and models used. The hypotheses are tested by using a variety of econometric techniques to ensure the reliability of results and to properly account for the special difficulties associated with cross-section time-series data. Each hypothesis is also tested for income and regional effects.

Chapter 5 presents the empirical results of these tests. Ultimately, I find support for many of the hypotheses, and conclude that financial market development does have a significant role to play in the political and economic development of a nation. In addition to support for the hypotheses on poverty and income inequality levels, I find that there is support for the idea that financial market development increases the level of political competition, governmental effectiveness and regulatory levels within a nation. An increase in financial market development also results in a decrease in corruption. However, I do not find a significant relationship between financial market development and economic growth, political participation, human capital or institutional democracy, although there may be support for a positive relationship between financial market development and improvements in civil liberties and political rights. I conclude that there is strong support for some indicators of political and economic development, but that fifteen years might be too short to see the all the potential effects on overall democracy levels.

In chapter 6, I discuss the implications of the empirical tests overall, and then separate the results by geographic area. Two regions have contradictory results: Latin America has higher levels of development than would be suggested by the level of
financial market development, while the Middle East has lower levels of development than their financial markets would suggest. I consider possible explanations for this, and also provide an example of how financial markets work at a grassroots level by detailing the case of Russian agricultural cooperatives.

The final chapter summarizes the contribution of this work to the field. Improvements and possible extensions of this work are also presented along with possible policy implications and prescriptions. These policy ideas are intended to provoke future debate and underscore the need for additional research.
CHAPTER 2
THEORIES OF DEVELOPMENT

Introduction

Amartya Sen succinctly summarizes development as “the process of expanding the freedoms that people enjoy.” (Sen 1999, 3). Despite much attention and effort aimed at development, there is no one theory that has yet to be completely adequate at explaining development outcomes. This chapter discusses the various schools of development, and then explains how a focus on institutional development may alleviate many of the criticisms experienced by other theories.

Defining Development

Development is a normative term and open to a variety of interpretations. A quick check with the dictionary reveals over nine different uses of the word. As such, there is no one definition of development that concisely conveys all the political and economic elements that one might include in the term. Most generally, Palmer defines it as “purposeful change that moves toward the attainment of a specific goal (1989, 7). Classical economics describes it as movement toward the best possible allocation of resources. This was broadened in the neoclassical sense to mean an increase in production and consumption that improves employment and living standards.

From a theoretical perspective, a distinction needs to be made between growth and development. Growth is often defined as an increase in production or capabilities within a given system in production. Growth is a component of development, but is not the only component. If we include political elements to the economic definitions, development can be thought of as economic growth that occurs along with increases in
generalized living standards through improvements in economic and political institutions (Adelman 2004).

Classical Approaches to Development

Political economy originated in the eighteenth century with the writings of Adam Smith, David Ricardo and Thomas Malthus (Smith 1776; Ricardo 1817; Malthus 1933). Economic thinking at this time was influenced by the Enlightenment, and centered around the idea that individuals would prosper when free from the shackles of government and organized religion (Clark 1998). To put this in a historical context, liberalism was a reaction to the absolute (and occasionally arbitrary) rule of monarchs and feudal rulers. Individual prospects for economic activity were determined by one’s rank in society, and capital resources were allocated based on connections and favoritism rather than the viability of the investment. On other words, liberalism was a reaction to state power that constrained economic growth and capitalist investment.

Liberalism then focuses on market mechanisms as a way to allocate resources in the best interests of all: competition ensures that production and demand are organized in a way that represents the best utilization of the available resources. Classical models make two important assumptions: markets have perfect information, and that markets do not fail. Ricardo’s ideas of comparative advantage, where countries specialize in their areas of strength and trade for others, also provide for specialization of economies and optimal allocation of production. Savings and capital accumulation account for growth in classical models, as increased savings can then be used to invest in other activities. Government’s role should be limited to creating and maintaining a system of laws to protect the rights of individuals.
While the classical thinkers were strong proponents of a pure market system, they acknowledged the fact that markets were bound to fail. However, they posited that government intervention in a failed market would only exacerbate the problems. Increasing poverty and inequality accompanied greater industrialization, and the pressure for more government intervention increased. With the Great Depression and the severe consequences of market failure, classical political economy fell out of favor.

The Neoclassical Renaissance

Neoclassical theorists such as Veblen (1898) posit that developing nations were simply slow to adopt modern economic principles of development. Neoclassicism arose in the early post-World War II period, and was formulated in an effort to explain the variation in levels of development among nations. In the neoclassical model, development requires that nations shift from low-return activities (usually commodity production) to higher return, industrial economies. This theory essentially hypothesized that as nations adopted these “better” practices, poverty would subside, and development would occur.

Not surprisingly, neoclassical development theories have some correlates with neoclassical economic growth ideas. The growth theories utilize an assumption of perfect information, rationality of all actors in the market, and that all actors will seek to maximize profits (Nelson and Winter 1974). It also implies the existence of a set of institutions to provide contract enforcement and enforce the rules of the market. Production is determined by supply and demand equilibria, and the resulting production will be pareto optimal (a condition in which no individual can be made better off without
another being made worse off). In order to generate growth, and development, a free market economy is essential.

Similarly, neoclassical development theory conceives that there are few real obstacles (capital, political, or institutional) to shifting resources to activities that would generate higher returns for a nation. Neoclassical theory is, in essence, an exogenous model in that the rate of growth and development are determined by largely external factors. Lack of domestic demand can easily be supplemented by international trade. If barriers to international trade are removed, the law of comparative advantage will apply, and nations will consequently develop. The role of the government is to remove impediments to trade and the free functioning of the markets; the resulting economic growth will then lift a nation from poverty and create development.

Criticisms of this approach concentrate on unfavorable terms of trade, infrastructural and technological inequalities, and the low level poverty trap that seems to ensnare low income nations. The presence of market failures, negative externalities, a lack of public goods, and most importantly, the lack of explanation on the origin of growth (Bardhan 1990; Resnick 1975) are all problems that are not addressed by neoclassical theory. Finally, some argue that the assumptions underlying neoclassical ideas are unrealistic when applied since they are based on ideal conditions (Blatt 1983).

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1 Low value activities, such as agriculture, make capital accumulation difficult. The resulting underinvestment in infrastructure, and population pressures further prevent the development of high return activities, which frequently require high levels of initial investment. This was originally noted by Leibenstein, Rosenstein-Rodan and Norske.
Other Neoclassical Approaches

While Marxism provided one possible alternative to the classical approach, many were sceptical about the benefits of communism. A modified version of the classical theories emerged from Cambridge and included scholars such as Keynes and Robinson (Keynes 1936; Robinson 1933). They acknowledged the reality of market imperfection, and concluded that government could intervene to respond to the problems of imperfect information and lack of competition. Keynes took this further, and proposed that governments should actively stimulate the economy to protect an economy against depression and unemployment. While Keynes did not specifically address economic development per se and was concerned more with economic growth theories, his theories on intervention still heavily influenced the field of development. Thus, development was the result of active government intervention to eliminate the negative effects of market failure while relying on market mechanisms to efficiently allocate resources.

Schumpeterian Approaches

No discussion of neoclassical development theory and its critics would be complete without a discussion of Schumpeter and his theory of development (Schumpeter 1934, 1954). Schumpeter is often associated with Keynes in that he advocates a larger government role in managing the economy. However, Schumpeter was more interested in the development of institutions that were supportive of a strong capitalist system, and rejected outright intervention in the economy in the ways that Keynes advised (Schumpeter 1954). In particular, Schumpeter advocated the development of a system that was supportive of entrepreneurs and felt that growth was
achieved through innovation and support of technology rather than the pure supply and demand models of neoclassical growth theory (Nelson and Winter 1974).² Schumpeterian development models are often classified as endogenous models because of the emphasis they place on innovation and entrepreneurship (Romer 1986).

Statist and Corporatist Arguments

In the developed nations, corporatist and statist arguments served as the counterpoint to the neoclassical strategies of the past. Neoclassical, liberal policies were seen as partly to blame for economic malaise experienced by many nations in the early twentieth century, particularly the economic issues leading to World War II. Post war thinking held that under a neoclassical system, collective goods will be underprovided, negative externalities will not be controlled, international conflicts will not be handled appropriately, and national security could become a problem (Rueschmeyer and Evans 1985). By the 1960s, Keynesian state intervention and increased social protections were increasing common as part of US economic policy, and as part of the Marshall Plan in Western Europe. Higher levels of regulation, greater intervention in monetary policy, and protectionist elements designed to stimulate domestic production were seen as the answer (Overbeek and Van Der Pijls 1993). Governments directed credit and other resources to what were considered key industries (Berthelemy and Varoudakis 1996). Unfortunately, the stricter regulations and state intervention in the economy was followed in the 1970s by stagflation, OPEC, and high unemployment. The negative economic events in the US and Western Europe in the 1970s led to

considerable questioning of the state intervention models that had been used in the industrialized world.

Concurrently, those that did not subscribe to dependency thinking in the developing world also put forward that government intervention in developing nations, not the dominant-peripheral relationship, was the cause of underdevelopment (Biersteker 1995). For all economies, the state came to be seen as the principle impediment to development, not the market. The failure of interventionist policies in the industrialized world, along with the failure of dependency-derived policies in the developing world, developed into a new school of liberal thinking led by several economists at the University of Chicago, most notably Milton Friedman (Hayek 1944; Friedman 1962; Stigler 1963).

Endogenous development models, as the name suggests, take into consideration internal factors within a country, and use this as an explanatory factor for variations in growth and development instead of using purely external explanations. Human capital is the most often cited variable, but other endogenous factors can include technological innovation, research spending, and knowledge “spillovers” from foreign investment (Martin and Sunley 1998).

Modernization Theory

In the 1950s, other explanations for growth and development emerged. Modernization theory originated from sociology, and postulated that “irrational” social and economic values, along with the lack of technology and capital, were responsible for underdevelopment (Rostow 1960; Deutsch 1961). These traditional social values and economic structures needed to evolve before economic growth could take place
Development would occur when the cultural and institutional constraints were removed.

Modernization theory is built around the Western development history, and divided into stages of development (Lerner 1958). Industrialization and democracy are key elements of this theory. These are explicitly described in Rostow’s seminal 1960 book *The Stages of Economic Growth*. A nation starts from a traditional society, with a labor-intensive, agriculturally based economy. This is followed by a transitional stage, where revenues from trade surpluses are used to fund infrastructure and higher return investments. The third stage, the “take-off,” is characterized by rapid industrialization, a shift to a manufacturing based economy, and the development of supporting institutions. During the third stage, the economy is heavily dependent on one or two key sectors, but technological innovation will diversify the economy in the fourth stage. By the final, fifth stage, modernization is complete, and society enters the age of mass consumption.

Criticisms of modernization stem from its imitation of the western development experience, and its perceived ethnocentric bias (Tipps 1973). It does not consider any exogenous factors as explanations for underdevelopment, nor does it take into account the quality of natural resources available within a nation (Tipps 1973). Huntington notes that concepts of “traditional” and “modern” are not comparable (Huntington 1971). Others question its applicability outside North America and Western Europe and imply that modernization is a form of cultural imperialism (Schiller 1976).

The Dependency Response

In the 1950s, Raul Prebisch determined that conventional economic theory was not working as expected in Latin America, and that the terms of trade were in fact
declining in these nations. He theorized that the structure of labor markets, imperfect competition and income elasticity for manufactured products doomed Latin America to perennial underdevelopment (Prebisch 1950). Dependency theory thus developed in the 1950s and 1960s as an explanation for the lack of development in Latin American and other underdeveloped countries. Rather than emphasizing that nations have control over their growth, dependency theory argued that “the economy and expansion of certain countries is conditioned by the development and expansion of another economy to which the former is subjected” (Dos Santos 1970, 231). In contrast to other theories, dependency theory relies on the idea that economic development’s benefits are not equally shared among all nations, and that one nation’s development might come at the expense of another, a notion not accounted for in neoclassical economic theories.

The dependency school contends that the market system divides nations into two groups: core, developed nations and periphery nations who are forced to depend on the core nations. Dependency theory argues that there is a hierarchical system of dominance in the international system and that nations are placed into the system according to the needs of the core countries (Frank 1978; Cardoso 1972; Cardoso and Falletto 1979). Therefore, external factors are responsible for the differing levels of economic development. In essence, it is an exogenous systems-level theory with an emphasis on post-colonial history (Valenzuela and Valenzuela 1978).

While Prebisch was more concerned with economic growth in particular, Theotonio Dos Santos looked at this situation and used dependency theory to explain the persistent poverty experienced by Latin American countries. He theorized that
peripheral nations were subjected to a particular internal and external structure under the international system, and it is this system that “depends and aggravates the fundamental problems of their peoples” (Dos Santos 1970, 231). This occurs by transferring raw materials from the dependent nations to the dominant countries, where the material is transformed into products and then sold back to the dependent nation as a finished product. The dominant nations can set prices and markets for raw commodities and finished goods, while keeping the profits from the value added in manufacturing. The dominant countries also finance this operation and generate interest which can reduce any potential saving by the dependent country.³ Dependency theory also holds that foreign capital generally retains control over the most valuable sectors of the economy, and repatriates most of the profits, leaving the dependent nation to rely ever more heavily on foreign financing to fund the nation’s economic activities. Dos Santos further points out that foreign aid is often used to subsidize imports and attract foreign investment, whose products compete with national products, and drive down prices. Since dependent nation economies are generally much smaller than dominant nations, national production cannot achieve the economies of scale that larger economies can, and thus are much more expensive than imported goods.

Prebisch and others used dependency theory to create a system of policies designed to combat the perceived inequalities between the core and the peripheral nations by changing the structure of the national economic system. The first policies, designed by Prebisch, centered around an increased role for government intervention in the economy through macroeconomic adjustment and developing national production

³ This was also noted by Prebisch (1950) and Baran (1957).
and demand (Prebisch 1950). Two schools of thought developed around policy. Some, such as Frank, felt that socialism was the answer (Frank 1969). Cardoso focused on dependent development, or associated development as it is sometimes known (Cardoso 1972). These strategies were designed to create development within the context of dependency, and were more oriented toward Prebisch’s ideas of domestic production. Under import substitution industrialization (ISI), states were responsible for planning and running industry. ISIs were particularly popular in Argentina, Brazil, and Mexico (Valenzuela and Valenzuela 1978).

These strategies, however, did not have the desired effects in the long run. Production beyond basic goods was difficult, and the capital, technology and knowledge to produce these goods was scarce. In particular, the lack of foreign exchange capital was a reason why import substitution strategies did not work, but technological innovation in the center also played a large role in making dependent nations products expensive and non-competitive (Valenzuela and Valenzuela 1978; Soederberg 2004).

There is also a class component to dependency theory that is heavily influenced by Marxist thinking. Under dependency, a small, local elite holds some power, while real power is contained in the dominant countries. In this way, dependency theory goes beyond basic ideas of terms of trade, and becomes an explanation for societal effects as well as economic ones (Cardoso 1977; Dos Santos 1970; Frank 1969, 1978). In Frank’s thinking, underdevelopment and dependency are not the result of missed modernization, but peripheral nations are necessary for the center to develop. Since capitalist development is a zero-sum game, the periphery is underdeveloped to the advantage of the center. Ahgiri Emmanuel (1972) in his theory of unequal trade, argues
that capital mobility combined with labour immobility leads to a devaluation of peripheral exports and that this is another method of surplus extraction that mires the peripheral countries in economic stagnation. The unequal trade argument is compelling not only for its support of dependency theory, but also because it provides a direct refutation of the notion of comparative advantage, a key point in neoclassical economics.

Recent dependency theory arguments imply that financial markets are a tool that foreign capital uses to keep dependent nations under control. It argues that foreign currencies and investments are used to the advantage of the dominant nation and the detriment of the dependent ones (Soederberg 2001, 2004). International institutions such as the World Bank and the International Monetary Fund (IMF) compel smaller nations to adopt monetary policies that are advantageous to larger hegemonic nations, and the free-floating currency system further exposes nations to the vagaries of commodity prices (Amin 1997). Other arguments hold that the World Trade Organization (WTO), and its predecessor, the General Agreement on Tariffs and Trade (GATT), also create conditions that disadvantage nations in the periphery (Amin 1997). They also contend that economic liberalization is advantageous to dominant nations and does little for dependent nations because it depresses global prices for the raw materials that the dependent nations are exporting. As such, financial markets and economic liberalization tend to lead a dependent nation into further trade imbalance, and to a greater level of dependence and poverty than before. Financial dependency, while now a major focus, is not a new idea. Baran and Sweezy (1966) refuted some of the financial dependency arguments by pointing to a lack of domestic demand as the problem rather than financial flows. William Robinson also explains the liberalization of
commodities markets as a further way to increase the dependency of these nations, and ensure their continued poverty (Robinson 2004).

Dependency theory, however, specifically discusses foreign capital, and does not address the effects of domestic capital or domestic financial markets, except where they are used as tools for the dominant nation. Admittedly, there was a distinct lack of domestic capital in Latin American countries, but dependency theory was also used to explain underdevelopment in more affluent middle income countries where there is some degree of domestic capital and investment. In a sense, dependency theory presents an all or nothing picture of development. Either a nation is dependent on another, and its economy and development are completely controlled by the dominant nation, or it is a dominating nation. The way out for dependent countries is to cut off the relationship with the dominant nation, and develop in an isolated manner. There is no room for moderation, since dominant countries would use any opening to exploit the dependent nation and bring it back to full dependency.

Critics claim that dependency theory provided an explanation for underdevelopment, but has not produced any successful policy solutions (Palma 1987). The failures of ISI is usually blamed for this, although more recent analysis suggests that ISI policies were more effective than they are given credit for. Rodrik (1999) contends that ISI performance was relatively good for the time and comparable to other developed nations. Other scholars point to the lack of empirical evidence to support the dependency arguments as reason to dismiss the theory altogether (Kaufman et al. 1975; Chase-Dunn 1975). With the failure of ISI and state controlled development strategies, the dependency school fell out of favor.
The Neoliberal Revolution

Neoliberal theory was derived from the classical school and held that markets, not governments, are the key to growth and that growth and poverty reduction can be achieved by completely opening an economy to global commerce. Primary objectives for a neoliberal program include fiscal discipline, financial liberalization, exchange rate liberalization, privatization of state owned industries, and deregulation (Biersteker 1995). This theory sees the role of the state as a creator and protector of institutions designed to assist the transactions of the market. These include strong property rights protection, legal and enforcement institutions, and the creation of new markets through privatization. Aside from these duties, states should not intervene in these markets, or should keep intervention to the absolute minimum required for continued functioning of the free market. States should also remove any restrictions that might fetter the markets (Friedman 1949). For example, trade restrictions, capital controls, and other vestiges of national economic protection are all considered detrimental in neoliberal economic thinking. Markets, not governments, are thought to have better information, and are therefore more capable of determining correct prices, outputs, and the most efficient resource allocation.

Neoliberals, today dominant in shaping development policy, have largely vanquished once influential statist prescriptions for promoting economic development and improved welfare outcomes in developing nations within key policy arenas. Neoliberals argue that greater economic openness leads to modernization, technological innovation, and long term growth (Kaminsky and Schmukler 2003). Foreign direct investment, encouraged by economic liberalization, increases capital
flows to developing nations and allows learning and entrepreneurial maturation. Expanding market opportunities and increasing choice ensure upward mobility for nations. The neoliberal school of thought acknowledges that exploitive relations between countries exist, but treats them as the exception rather than the norm. Further, neoliberal theory maintains that protectionist policies and government regulation generate internal disorder by providing corrupt incentives for state actors and retarding investment. They also argue that problems in countries pursuing neoliberal reforms come from bad policy decisions that interfere with the functioning of the market system.

Neoliberal orthodoxy usually has the following goals: macroeconomic stability, a reduced government role (especially concerning deregulation and privatization), and reduced barriers to trade, or open markets (Stallings 1995). Essentially, it aims for the organization of an economy so that it “rationally allocates resources” and ensures the financial solvency of the state (Przeworski 1991,136). In the developed world, this means deregulation and privatization. In the case of underdeveloped economies, it means that export-led growth is preferable to import substitution strategies and the primacy of the private sector. In stark contrast to ISI strategies, export-led growth (ELG) strategies call for nations to develop their industries and gear production for international rather than domestic consumption. ELG strategies are based on the idea that increased exports increase trade. Increased trade circulates technology and allow countries to use their comparative and competitive advantages. Further, exports allow nations to accumulate capital and to stimulate domestic demand and consumption. Finally, the resulting trade surplus from exports prevents balance of payment deficits
and results in better economic stability for exporting nations (McCombie and Thirlwall 1994).

While the economic events of the 1960s and 1970s led to neoliberal thinking, political events also played a role. To many, the decline and collapse of the Soviet Union meant that developing nations had learned and accepted capitalism as the only legitimate form of economic alignment. Others have refuted this idea and argued that the adoption of neoliberal policies reflected the growing influence of the international financial community and wealthy nations’ desire to further exploit developing nations as new sources of profit (Soederberg 2001; Robinson 2004).

In some cases, neoliberal policies equated development with growth, an approach that conveniently ignored the distribution of wealth and the welfare consequences of growth under neoliberal prescriptions (Knight 2001). In neoliberal thought, income distribution should be determined by the market and governments should avoid redistribution programs since redistribution takes money from the (wealthy) investment classes where growth originates (MacEwan 1999). Neoliberal economic policy also avoids the inequity debate because in theory, the increased rate of growth will automatically bring about a more equal distribution in income. This is due to a concept known as Kuznet’s inverted U. It states that as economies develop, there is a tendency for inequality to increase for a period as the economy adjusts, then decreases, resulting in an inverted U-shaped curve. Inequality increases temporarily, but the long run effect is positive (Kuznets 1955). There is no state action needed since any intervention will harm growth. Neoliberal policies encourage growth, and economic growth improves the lot of all residents of a nation.
Neoliberal theory also contends that there is also no policy distinction needed between developed and developing or emerging nations. The same market rules are applied to every nation in the global system regardless of its level of development (Palan 2000). Policy differentiation is not needed because markets work in the same fashion regardless of location, an idea directly lifted from classical economics.

There is also a sense that there can be “no alternative” to neoliberal economic orthodoxy. With this argument, proponents of neoliberal practices argue that all the other possible avenues for development have been explored, and subsequently failed. Economic liberalism is the only remaining path, or at least the only politically feasible path left for nations to follow.

Critics of neoliberal policy claim that its emphasis on deregulation undermines the state by removing it from economic decision making and hamstrings efforts to promote social welfare. Others criticize the wisdom and efficacy of export oriented strategies (Blecker 2002, 2003; Felipe 2003). Biersteker states that neoliberalism often works in favour of wealthy multinational corporations, that its incentive structure is likely to lead to environmental degradation, and it can devalue the collective, communal nature of countries (Biersteker 1995, 188). However, the most consistent criticism of neoliberalism is that it fails to provide a basic level of subsistence for a large portion of the population, and increases the inequality present in a country (Krueger 2001), and that it can retard democratic development (Diamond 1999; MacEwan 1999).

There is some evidence that neoliberal thinking is undergoing a change. Purely economic analysis (on which much neoliberal thinking is based) skips over the historical and political realities of a nation, and therefore is not able to provide a complete
explanation of events. It is not surprising, then, that neoliberal practices often have difficulty when implemented in developing nations. Political structures create constraints on the abilities of a nation to implement neoliberal policies, and others create such a disruption to the daily life of citizens that they must be repealed or considerably revised. For example, the structural adjustment loans given by the World Bank and the IMF, two major proponents of neoliberal reform, are contingent upon the implementation of a neoliberal program. Over 50 percent of recipient nations, however, have their programs cancelled, or cancel themselves after the difficulties with implementation proved insurmountable. In response, in 1998 both the World Bank and the IMF began to consider the political and welfare consequences of their policies when devising new structural adjustment programs. Krueger (2001) suggested the need for fundamental changes to the way the IMF responds to crises. One might consider this to be an admission that pure neoliberal programs are neither as feasible nor as effective as they might wish. Some neoliberal programs have been accused of sparking a backlash that has been termed a “movement of rage” because these programs are often tied with perceived inequalities within a country (Jowitt 1992). Amin (1997) ties the rise of ethnic movements and conflict to increasing globalization and neoliberal policies in developing countries. He argues that through the internationalization of markets, people look for identities outside national frameworks. This internationalization hollows the state and limits its abilities to control conflict. Ruling classes then seek to mobilize and increase their support on the basis of ethnicity. These groups inevitable come into conflict as they try to control and shape their environment (Amin 1990, 1997). Eichengreen (2002) argues that IMF bailouts allow investors to exit without
consequences, and leave the repayment task to the nation’s citizens. Other cracks have appeared in the neoliberal veneer. The 1997 Asian financial crisis and the resulting contagion worldwide demonstrated one of the possible downsides to a completely liberalized and global market; a downturn in one market can dramatically affect others. More recently, Argentina and Turkey underwent extensive neoliberal reforms but were dragged into serious financial crises nonetheless (Eichengreen 2002).

Despite this, neoliberal policies still dominate most policy discussions, exposing ever more nations to the potential pitfalls and benefits of the market system. Much like Hegel’s “accidental individual” who fails because of factors in the market system (Hegel 1821), however, nations today can “accidentally fail” in today’s global market. It seems prudent to attempt to determine what types of policies might insulate the citizens of a nation from the negative welfare consequences that globalization and economic openness can bring. At the same time, it is important to develop policies that will not only protect a nation from further degradation, but will encourage and foster growth and development. By taking considerable market openness and globalization as a fact of life in the twenty-first century, I propose that developing nations can shield themselves from the risks of the global market while at the same time participating, and even benefiting from it.

Managed Globalization

All development theories serve two purposes: to provide an explanation for variation in levels of development, and to provide a possible course of action that will alleviate the condition of underdevelopment. The various approaches to development theory have some merit, but none has yet to both fully explain the variation in...
development and provide a solid course of action that results in increased growth and improved living standards.

Neoliberal theory usefully notes that there are learning and technological benefits to economic openness, as did its predecessor, the Schumpeterian model. These benefits can indeed increase the aggregate growth and development prospects of a nation. In addition, the notion that bad policy and corruption are to blame for many problems is also correct. Neoliberal development strategies, however, tend to minimize or undermine the institutional capacity of governments and, thus, their ability to promote social welfare outcomes. They can also vastly increase monopoly situations, and create a divergent group of elites that have the ability to subvert government actions (Rueschmeyer and Evans 1985). Further, they fail to consider social disorder, inequality, and other negative consequences as serious concerns that can undermine the state as a whole.

Like neoclassical and neoliberal theories, dependency theory also has some useful attributes. Multinational corporations and globalization can drain less developed states, and displace local populations. Less developed states are not always capable of coping with exogenous, international factors. These countries are price-takers, and heavily exposed to the vagaries of the market. Liberalization policies often create substantial trade imbalances, and further production exacerbates the problem of a low-income poverty trap rather than resolving it. ISI programs remove the threat of international market forces, but create heavy costs to the consumer, who is left with high priced, inferior goods. Yet dependency theory policies may also have some positive effects. State institutions may attenuate market shocks, overcome the
weakness of local capital, and contribute to improved welfare outcomes for their populations. Overall, however, dependency theory still fails to provide policy prescriptions that have resulted in higher levels of development.

I contend that there is a middle path that can tie economic theories to the political realities of running a nation. It is based upon the idea that globalization can be managed in a more effective manner, and that the state has the task of managing globalization for the benefit of its citizens. It can partially explain the variation in development levels between nations, and proves a course of action for developing nations. To do this, I will explain the goals of the development, the role of the state, and how a focus on institutions provides a way for states to achieve their development objectives. I will then discuss possible problems and criticisms of this approach.

First, we must examine the goals of development. If development is defined as purely an improvement in economic growth, then many different types of policies are effective. But development encompasses much more than simple economic growth. Consideration of the human condition within a nation should be paramount in any definition of development not only for moral or ethical reasons, but also because of its relation to political instability and revolution. This study will broadly define development as the economic, socio-cultural, and political aspects of a nation that bring about a positive change in a population. It also rejects the notion that development is a zero-sum game. I believe that a nation may be capable of generating growth and development without the detriment of another.
Whither States?

Next, we need to identify and reiterate what roles states play in society. Theda Skocpol bases her definition of states on the Weberian idea of “states as organizations that claim control over territories and people, and may formulate and pursue goals that are not simply reflective of the demands or interests of social groups, classes, or society.” (Skocpol 1985, 9). Reich (1991) identifies four major areas where the government has a comparative advantage: collective goods, such as environmental quality and national security, provisions for human capital (primarily education), physical infrastructure, and the development and implementation of technology. In short, governments exist to provide collective goods that would otherwise be difficult to procure in exchange for some authority over a particular area and people.

States, as authoritative actors within their territories, occupy a unique position in the global market in that they are the sole source of credible commitment in the largely anarchic international system. In addition, states are the only entity that is capable of implementing and enforcing changes within nations. A state has the ability to regulate activity within its borders, and if it wishes to do so, prevent international actors from playing on its fields. Further, states are still the only entities that have the ability to credibly enter into multi-national agreements and sign treaties. States can impose restrictions on markets, or eliminate them entirely. Consequently, any theory of development must delineate the role of the state if it is to provide anything more than a formal, theoretical model.
Toward a Theory of Managed Globalization

My argument uses portions of both neoliberal theory and dependency theory to explain variation in development, and to prescribe policies to improve political and economic development. It is essentially a statist argument with roots in the Keynesian critique of neoclassical economics: the idea that the market mechanism can falter, and that it is government’s role to prevent and correct market problems. The state has an inherent responsibility to protect its citizens. Bad government policies are to blame for some economic and political woes, but international factors matter as well. Globalization does not necessarily weaken a state, unless that state’s institutions are not strong enough to withstand the additional external pressure from world markets.

I contend that if the state works to develop institutions that actively support private market development, then political and economic development will result. This development occurs if a state develops strong institutions in the areas of property rights, contract law, enforcement, and the rule of law. None of this is particularly unusual, as this has been prescribed by all shades of development theory. In my theory, however, states that develop strong institutions and actively implement controls on market forces until the political and economic systems are more capable of handling the shocks that occur within the international financial market without undue disruption to the nation and its population. In other words, the state has a role of “nurturer,” almost as a parent who guards their offspring until it is capable of fending for itself. This is accomplished by developing effective and capable institutions, as mentioned above, but also by ensuring that the development that results is equitable. In contrast to heavily statist prescriptions,
or socialist ideals, I theorize that equitable development can be accomplished through market mechanisms that are tempered by active government intervention.

After a period of active government intervention, many private market institutions may be ready to stand on their own, and some of the neoliberal adjustments can be applied to accelerate growth and development. The most developed nations in the world do tend to rely on strongly market oriented policies, and have highly liberalized economies. But they also were liberalized gradually, after an adolescent period of institutional development, and only after national interests had been assured of international competitiveness. The state was far more protectionist than often acknowledged. For example, the airline and telecommunications industries were heavily protected in the United States until recently (Luttwak 1999). For developing nations, these development shortcuts might do more harm than good by creating conditions that are ripe for potential financial, economic and political crises.

Weber notes that effective state intervention can only be accomplished with the development of strong, specialized institutions (Weber 1947). Yet government institutions often have insufficient knowledge to efficiently react to all social and economic interactions in a given system. Decentralization of institutions may result in greater efficiency and may remove some political liability (and thus the temptation to create policy to generate votes in a democratic system), but decentralization is difficult for states to do since they need to work as one functioning unit (Rueschmeyer and Evans 1985). Consequently, a state that uses private markets whenever possible may more efficiently provide goods and services. While the state has the responsibility to protect and foster institutions, limiting the role of the state to the development and
nurturing of these institutions, with the explicit intention of strengthening the ability of the market, may improve their ability to resist shocks and to provide benefits to the population. This limited role for the state then avoids issues of allocative inefficiency that plague nations where governments have a substantial stake in the distribution of capital resources, or an interest in the success of certain economic sectors. An example here is the government intervention in the Japanese banking sector, where the government had a substantial stake in the banks, and made bad loans based on political concerns rather than objective risk analysis.

In contrast to neoliberal theory, the nurturer theory provides a larger role for the state than merely creating market conditions. It assumes that the market is not perfect, that markets can and do fail, and that the market does not do a good job of providing certain collective goods. It also assumes that there is no universal policy prescription.

Explaining Variation

A wealth of recent literature uses institutional development to explain variation in development (Rodrik 2002, 2004; Acemoglu et al. 2001), and the problems with institutional development (Acemoglu 2005). The arguments boil down to the notion that insufficient or inappropriate institutions retard growth and development. Improving institutions, not surprisingly, should be a focal point on any development agenda. North (1990, 1994) uses institutions to explain variation in economic development throughout history, and notes that institutional structure can consistently explain economic outcomes. Glaeser et al. (2004) however, contend that policies rather than formal institutions are more important in determining economic growth. Yet most criticisms look at formal institutions such as constitutions, while many institutionalists, such as
North, consider the informal and social institutions in their explanations. In other words, beneficial institutional outcomes do not result from a rigid set of institutional designs (Rodrik 2004), but rather ones that take into consideration the particular economic and political cultures of a nation. This can present problems for policy makers looking for one-size-fits-all prescriptions. Under the Washington Consensus, the same prescription was given with no regard to the particular problems or needs of nations. Nations differ in their economic cultures and these differences can result in very divergent policy outcomes. 4 One might reasonably argue that effective development policy will take the nature and context of institutions seriously. Managed globalization allows each state to develop institutions that fit with its individual needs, but by working through market mechanisms, it still ensures that these institutions “translate” into mechanisms that work within the global system.

**Benefits of Managed Globalization**

Developing states can use their limited resources by fostering development in certain areas, and allowing the private market to provide services rather than the state in areas where it does not have a competitive or strategic advantage. This is expected to allow the state to capture the efficiencies of the market system while concentrating on the development of particular institutions that foster growth and development. Managed globalization allows states to take into consideration the particular needs of a nation and

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4 For example, the corporatist structure of Germany and Austria differ completely from the chaebol system in Korea, or the liberal structure of the UK. Important institutional differences persist among the advanced countries of North America, Western Europe, and Japan—in the role of the public sector, the nature of the legal systems, corporate governance, financial markets, labor markets, and social insurance mechanisms, among others (Rodrik 2004).
develop its reliance on the market. A nation can then selectively participate in the international market, and still provide a level of protection to its citizens through its institutional system.

Possible Criticisms

One oft mentioned consequence of globalization is the idea that it “hollows out the state,” or that governments become responsible to international organizations and corporations (Strange 1996; Jessop 1993). Governments essentially become reduced to puppet states that are no longer responsive to the needs and interests of their populations. The market in effect supplants the government, and only the interests of the elite are represented.

The hollowing of the state argument is a criticism that could be applied to my theory, as well as many others. However, I argue that states are not “hollowed” in the international system if the state is still capable of regulating international trade within its borders, and is responsible for its domestic and international policy. Hollowing implies that there is a shell, or a void, where the state once existed, and that it no longer functions with any degree of sovereignty. There is a considerable amount of difference between true hollowing and transformation. Changing and developing institutions to reflect new international norms do indeed constitute a modest transformation of the goals and activities of the state and its institutions. Increasing economic liberalization and globalization will transform the state to some extent. However, transformation should not necessarily be confused with hollowing. Even in cases where hollowing does occur, states that develop institutions that work to develop strong financial systems may be able to filter and diffuse global capital and global interests before they create
problems. Effectively managing globalization by waiting to fully enter the global market until the institutional structure is developed can prevent hollowing by creating a system of checks and balances within the national system that keep the government responsive to the needs to the population. Yet this does not satisfactorily address the issue of state autonomy, and is an area of weakness.

State Capacity and Autonomy

The managed globalization theory states that global financial flows are not inherently problematic, but that the lack of institutions strong enough to handle them creates the problems. Having the right institutional structure at the right time, however, is a tricky process. While institutional development is time-consuming and difficult, large scale institutional reforms are usually unnecessary to stimulate development (Rodrik 2004). Good institutions are usually required to sustain development (Rodrik 2003), but economic and political development can occur concurrently with institutional development with few adverse effects. It is not necessary to have the institutional infrastructure completely in place before the benefits of managed globalization are seen. As long as the state has the minimal capacity to impose and enforce institutional reforms, development can occur. My theory assumes that a nation has the minimal capacity to regulate and enforce its policies, and therefore the ability to direct the development of its institutions.

State autonomy is an issue in many developing nations, and is something that can not be assumed in any theory, particularly when dealing with countries with very low levels of state capacity or failed states. Some degree of state autonomy is required for any state to be an effective actor. As stated above, the theories presented in this study
do assume that a state has some minimal degree of capacity and autonomy. However, if a state has even a basic structure to work with, I posit that they can use their limited capacity to develop better institutions and create a cycle of political and economic development that might eventually result in greater state autonomy and capacity.

Summary and Discussion

This chapter reviews the various schools and theories of development, and proposes a different approach that combines elements of state intervention with market mechanisms as a way to foster development in an increasingly integrated international system. Variation in development occurs because of differences in institutional structures within nations. I argue that development may be fostered by creating institutions that support private market activities while actively limiting market activity until the institutional structure is fully developed. Of course, claiming that institutions are important is hardly groundbreaking. It is only logical to assume that having high quality institutions results in better performance. Indeed, Katzenstein (1985) noted that vulnerability to international markets led small trading states to develop unique institutions that insulated the population from the negative consequences that result from volatility in international markets. The question then becomes “which institutions are more effective and where should governments concentrate limited resources?” These questions are more fully addressed in the next chapter.
CHAPTER 3

FINANCIAL MARKETS AND POLITICAL DEVELOPMENT: THE THEORETICAL FRAMEWORK

Credit is an essential element to liberty…
    - J.A. Hobson

Introduction

In Chapter 2, I argued that nations should be able to manage globalization to their benefit by developing institutions that work with the market. In this chapter, I argue that variation in political development levels can be partially explained by the internal structure of a capitalist nation. Specifically, I posit that the financial market system of a nation is critical to its economic and political development and provides an explanation for the various levels of development among nations. In this chapter, I first provide an explanation of how institutions can protect a nation from the vagaries of international capital flows. I then explain why the financial sector is an area of crucial institutional development, and the mechanisms by which it promotes political and economic development. I also note some of the potential problems with financial market development and political development research. Finally, I derive a series of testable hypotheses from this theory.

Institutions as a Filter

Institutions provide an approach to examining a problem, but can also provide an explanation for variation in many cases. North defines an institution as “any form of constraint that human beings devise to shape action” (North 1990). This is a rather broad definition, but one that encompasses all the complexities of examining institutions. Campbell (2004) more specifically defines institutions as “formal and
informal rules, monitoring and enforcement mechanisms, and systems of meaning that define the context within which individuals, corporations, labor unions, nation-states, and other organizations operate and interact with one another.” Using these definitions, we can think of institutions as a filter between an action and the outcome. Good institutions result in efficient outcomes that distribute resources in the most productive manner. Bad institutions are inefficient and result in outcomes that are skewed or result in a less optimal outcome.

In the case of a nation participating in the global financial system, institutions are the first barrier, or first structure that the capital (currency, trade, or otherwise) encounters. In a sense, the structure of public and private financial institutions acts as a filtering mechanism for global capital flows into, out of, and within a nation. It is the structure of this institutional filter that is key to providing some explanation of the varied outcomes between nations with similar levels of capital flows.

One could think of the whole filter as being comprised of private, for-profit financial institutions and the regulation, legal system and enforcement mechanisms needed to create a strong filter. In a sense, the entire financial sector acts as the filter, and the quality of this sector determines how capable it is of creating positive outcomes for a nation (see Figure 3.1).
Global capital flows usually take the form of currency and direct investment. Since this form of capital travels through financial intermediaries, the internal structure theory will focus predominately on financial institutions, and the financial sector as a whole. I contend that the state can promote policies that both directly and indirectly improve the filter so that global and domestic capital flows are used in a manner that promotes the most efficient and broadest allocation of resources. I further contend that greater political development can be achieved by developing the financial markets.

This theory operates under a few key assumptions. First, to a large extent, it assumes that some globalization has already occurred. The majority of emerging, transitional, and developing nations are already exposed to and participate in the global market. Second, it accepts that sealing off these nations entirely from the global market (by import substitution strategies, or central planning systems) is not a viable option.
Third, it assumes that a state has the capacity to regulate its markets, and finally, it assumes a state of market imperfection.5

The assumption concerning market imperfection is an important one, because many neoliberal ideas are based on economic theories that assume perfect markets. Many empirical studies, however, show that markets do not operate in a vacuum, arbitrage opportunities exist, and that there is a level of uncertainty in the global market (Fama 1970; Fama 1991). Hence, the theory presented here alleviates some of the criticism of neoliberal theory by taking into account the actual market conditions rather than the theoretical.

Justification of Financial Focus

Financial market research touches a variety of areas of interest to political science researchers. There is considerable empirical evidence showing a positive relationship between the level of development of the financial markets and economic performance. Starting with Goldsmith’s 1969 empirical work, and continuing to more recent works, studies have consistently shown that countries with more developed financial markets have better economic performance than those with less developed markets (Goldsmith 1969; McKinnon 1973; Shaw 1973; King and Levine 1993; Levine

5 Classical finance theory often uses the notion of market perfection, in which both buyer and seller have symmetrical information, and that any changes to this information are reflected instantly in the price (Bachelier 1900). Information asymmetries occur because gathering information has costs associated with it. Different individuals have different amounts of resources that they are willing and able to spend of information, and thus the asymmetry exists. Greenwald and Stiglitz (1986) and Arnott, Greenwald and Stiglitz (1994) empirically show that this is not the case in world markets. Arbitrage, a situation where one player exploits an information asymmetry to his/her advantage, is technically impossible in the classical scenario. An example of arbitrage occurs when a trader buys a commodity on one exchange and then sells it on a different exchange where the price is different, and then profits from what should be an identical transaction.
Finance also interacts with other areas of economics aside from growth. Observers of economic crises from the 1990s forward have noticed that almost all of them were further exacerbated by problems in the domestic financial sector. In the cases of Turkey, Russia, and Brazil, weak financial systems were a major factor in causing the crisis (Caprio, Hanson et al. 2005).

Other research has shown that economic performance has political implications. Early modernization theorists such as Lipset emphasized economic development as a prerequisite for political development (Lipset 1959). More recent research shows that greater economic development corresponds to higher levels of democracy (Przeworski and Limongi 1993). Rueschmeyer, Stephens, and Stephens demonstrate the correlation between capitalist economies and political liberties (1992). Still other research examines the relationship between economic growth and the quality of political institutions (Knack and Keefer 2003; Keefer 2004).

Financial market policy is also a key concern for many international agencies and national governments. The World Bank and International Monetary Fund have shifted their policies to reflect a growing concern with both the health of the financial sector and the political development of their client nations (for example, the workshops on Financial Development and Economic Growth that began in 1994). Financial sector policies are of considerable interest to foreign investors and domestic policy makers alike, especially

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6 There is a counter argument that the lower risk provided by financial market development can actually harm economic growth by lowering savings rates within a nation. The effects of lower savings rates are ambiguous, but this possibility needs to be noted. See Levhari and Srinivasan (1969) for a very technical explanation of these effects.
since transnational corporations and mergers are becoming a routine event even in developing countries (Haggard and Maxfield 1996).

Given the links between finance, economics, and politics, it seems prudent to examine the effects of finance on political development as well as economic development. In doing so, I first define financial markets, financial market development, and financial depth. I then explain why finance and governments have a unique relationship, and should be studied in tandem.

Financial Markets

While we tend to think of financial markets as simply the stock market and banks, the financial market system can include a vast array of institutions that work together to operate the financial system. Generally, financial markets are composed of two elements: the government institutions and the private sector structures. Examples of government institutions include the legal environment, regulatory agencies, and dispute resolution mechanisms. Structures in the private sector include banks, securities exchanges, and other financial services such as mortgages, insurances and other specialized activities. Retail, or commercial banks are the traditional banks that provide demand deposit accounts, small loans, and other commercial services such as mortgages and small business loans. Investment banks, by contrast, generally arrange for the sale of securities, and match investors with projects.7 There can also be specialized firms that deal exclusively in market research, and brokerages that deal with exotic types of securities such as derivatives and options.

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7 Joint stock companies in the 15th century are the first example of investment banking functions.
Financial markets serve four major functions. In their most elementary form, the financial system provides a system of payment that reduces transaction costs (Berthelemy and Varoudakis 1996). For example, a check can be written to pay a bill, or a company can pay for capital equipment instead of delivering a suitcase full of cash. As an economy grows in sophistication, new forms of payment and services are required to facilitate those transactions. In this way, financial development can be thought of as the number of financial products available to facilitate payment transactions and ease the exchange of goods and services.

Financial markets also exist to mobilize savings and facilitate investment. Financial intermediaries, such as banks, allow for the aggregation of savings. This larger pool of capital can then be used to finance larger investments than would be available to individuals. In other words, mobilizing and pooling savings can allow investors to exploit economies of scale. Larger projects, such as infrastructure, or capital equipment can have a much higher rate of return and generate future productivity. These projects are usually beyond the means of any single investor; pooling resources allows a society to invest in these large undertakings. Economic historians note that the industrial revolution was accompanied by a concurrent revolution in financial markets so that large amounts of capital could be committed for longer periods of time (Bencivenga et al. 1995).

In addition, the pooling of savings allows for the diversification of risk by spreading savings between projects. A bank that invests in several projects simultaneously will not suffer too much if one project fails. By contrast, an individual who invests all his savings into one project is much more susceptible if that project
Allowing investors to diversify risk leads to better allocation of resources since higher risk/higher returns projects can be considered (Acemoglu and Zilibotti 1997). Risk diversification can also assist technological development by encouraging investment in riskier innovation activities (King and Levine 1993).

Financial markets also serve a supervisory function. Banks require certain conditions to be met before funding can be obtained or continued by firms. They can ensure, by potentially withholding funds, that a firm is engaged in the activity that it purports to be doing and meets some standard of competence. This supervisory role gives the financial markets an advantage in information over the individual investor. As such, financial markets play an important role in the transmission of information. As Ross Levine succinctly puts it, “financial markets are in the business of obtaining and processing information and making funding decisions based on that information.” (Levine 1996, 170). Without financial intermediation, each individual would have to evaluate every aspect of each investment. The financial markets reduce the cost of acquiring this information for investors by creating specialized institutions to gather information on a large scale (Boyd and Prescott 1986). In addition, financial intermediaries are more capable of assessing systemic risks than individuals since they work with multiple firms at any given time. The reduced cost of information, along with better knowledge of the systemic risk in a market, results in a more efficient allocation of resources within a society.

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8 The inability to allocate savings into a diversified portfolio is known more technically as investment indivisibility.
Financial Market Development

Given the major functions of markets listed above, financial market development can be thought of as anything that improves these functions and eliminates some of the cost associated with a transaction (Levine 2005). Financial markets evolve to find more efficient ways of handling transactions and reducing market friction. Different levels of regulation, contract enforcement, and taxation systems naturally result in financial markets that reflect these different environments. This is one reason why financial markets often look different from country to country.9

Sometimes it is easier to identify development by characterizing the opposite. An underdeveloped financial system is identified by its small size in relation to the size of the economy, and a narrow range of services that consist mostly of deposit taking institutions. Insurance, portfolio options, equities markets and pensions are usually lacking, and there is a low level of specialization among banks (Murinde 1996, 54). In general, financial markets are developed when there is a substantial degree of depth within the system that is accessible by a large portion of the population.

Financial market depth is a multi-faceted concept. It can mean the efficiency and competitiveness of the sector, the range of services that are offered, the type and quantity of institutions that operate in financial markets and/or the volume of capital allocated through the sector (Financial Sector Team 2004). It can also mean the efficiency with which the financial system utilizes information to reduce transaction costs, allocates capital, improves transaction efficiency (reduce market friction) and

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diversifies risk (Beck et al. 2004). Market depth takes into account the number of options available to investors, the availability of credit, and the number of risk hedging strategies available to market actors. It is also a reflection of how much economic activity takes place in the formal sector rather than underground or in the shadow economy.

The informal financial sector is defined by the fact that it has no legal position and is not subject to regulatory constraints (Murinde 1996). The informal sector fills the gap when formal institutions either do not exist, or are not meeting the needs of a population. Informal financial institutions are often inefficient in allocating resources, but may be the only option available in some societies. A large informal financial sector indicates a low level of financial development, and does not often provide the cost, risk, and supervisory benefits that the formal financial sector does. Investors also have little recourse in the informal sector, further contributing to higher transaction costs, risk, and inefficiency.

Markets and Governments

Financial markets have a special relationship with government in that financial markets must operate under a nation’s laws and are subject to the jurisdiction of a particular country. Governments have the ability to regulate financial market activity and can dictate the types and scope of activity in the market, and the tax regime that will affect it. Finally, and perhaps most obviously, the state determines the type of economic system that a nation will have.

Certain government policies, such as increased property rights protection and better contract enforcement, promote financial market development. Other policies,
such as the nationalization of banks or the relaxation of accounting standards, discourage it. While I will argue that financial market policies affect political development, governments certainly have a hand in how markets operate.

Not only do states have the authority to regulate and govern financial markets, there can be compelling reasons for the government to actively intervene in the markets. Joseph Stiglitz identifies five reasons that a government should act (Stiglitz and Yusuf 2001). First, the government has a responsibility to prevent contagion in the event of market failure. In economic terms, the government should prevent negative externalities in the international financial system. The Asian financial crisis of 1997 is a good example of market failure in one nation spilling over to others in the region after Thailand’s collapse.

Next, the monitoring and supervision of financial market institutions are public goods, and may not be provided in a pure (i.e. completely unregulated) market system. Financial market institutions can do a good job of supervising firms, but they are less capable of supervising and monitoring themselves. The costs of monitoring the basic institutions in a financial market system are high, and there is little incentive for the institutions to provide this function themselves. No oversight of these institutions creates uncertainty in the market and will limit investment to those who are willing to accept the additional risk. Arnott, Greenwald and Stiglitz (1994) and Greenwald and Stiglitz (1986) also argue that governments can and should intervene to correct the informational asymmetries that are the result of imperfect markets to improve market efficiency. This can be accomplished through the above-mentioned regulatory and supervisory activities. Levine (1996) notes that unregulated and unrestricted markets are often
unstable and inconsistent in providing services (p. 162). This essentially limits the mobilization of savings and investment, and will result in an inefficient allocation of resources that can lead to lower economic growth rates. An unsupervised market also provides an outlet for corruption, and an arena for patronage systems to develop.

Governments can also ensure competition to a certain degree by regulating industry concentration to prevent predatory monopolies. In some cases, the financial market structure itself may be incomplete, and the government may intervene by setting up public sector institutions to fulfil a specific need. Stiglitz, however, does note that in the case of incomplete markets, the financial system is best helped by creating conditions that are more conducive to the development of these specialized institutions rather than creating them as government run entities.

On the other hand, scholars such as Anne Krueger have blamed extensive government intervention as the reason for slow growth and underdevelopment. She terms this “government failure” and finds that excessive government regulation and supervision actually decreases the growth rate relative to an unregulated market system (Krueger 1990). Financial repression, an extreme version of government intervention, is essentially a set of government policies (usually a combination of restrictions on capital controls and domestic interest rates, and/or dictating the pricing and allocation of credit) that either serve to generate short-term revenue for the government, or distort the cost of credit for other distributional reasons (Giovanni and Melo 1993). Financial repression can also be thought of as a set of government restrictions that prevent financial institutions from fully performing all functions (Shaw 1973). While the government gain in revenue can be significant, financial repression usually results in shallower financial
markets and slower economic growth (Roubini and Sala-i-Martin 1992, Demetriades and Luintel 1997) and is often unsustainable.

A dose of pragmatism is in order when looking at government intervention. Cases where there is no government intervention at all simply do not exist (the closest being Hong Kong), and cases where government intervention is complete do not qualify as market economies. Determining the optimal mix of policies to promote growth while not tipping over into repression is a delicate balancing act, particularly in transition states where the temptation for short-term gain is considerable.

At the same time, there are incentives for politicians to work toward a balanced policy of government intervention in financial markets. Not only can a strong financial market system bring new foreign investment and an improved image internationally, the better allocation of resources results in higher levels of economic growth. Higher growth levels benefit all governments, regardless of the regime type. At the same time, financial sector crises caused by weak institutions can spill over into political crises as the population feels the effects. Governments therefore have a direct interest in ensuring some degree of stability and proper functioning of financial markets. Strong financial market development can provide a buffer for domestic and international capital flows, and allocate investment resources to the best projects. Good financial markets also create a safer environment for foreign investors, and may prevent speculative attacks on a nation. Domestically, financial market development can have even greater effects by positively affecting political and economic development.
How Financial Market Development Affects Political Development

Even as late as the 1980s, financial systems were not considered part of the development agenda, and were often an afterthought in the development process. The IMF and World Bank began to include financial systems in their assessment in the 1990s, and today it commands a considerable amount of attention, thanks no doubt to the financial crises of 1997 (Long 2002). Historically, research has focused on the effects of financial markets on economic growth. More recently, the role of financial markets in the reduction of poverty has seen some scholarly interest. Despite this research, we know remarkably little about the relationship between financial systems and political development, and literature on the subject is scarce, to say the least.

Traditional theories state that financial markets affect political development indirectly - that financial markets lead to economic development and this in turn leads to political development. Others have contended that the causal mechanism is reversed, and that political development leads to economic development. I posit that financial markets have a more direct role in political development than has been previously suggested, and that greater financial market development leads to greater political development, ceteris paribus. I further argue that financial market development affects political development both directly and through economic mechanisms. First, financial market development increases economic development, contributing particularly to conditions that are shown to increase political development. Second, I theorize that financial market development also affects political development by increasing equality, strengthening the middle class, and increasing political participation. The effects on socio-political stability are also discussed. Finally, I argue that financial market
development affects political development directly by creating more efficient institutions and eliminating opportunities for perverse incentives by government.¹⁰

Financial Market Development and Economic Development

There is a voluminous amount of theoretical research on the relationship and causality of financial market development and economic growth starting with Bagehot and Schumpeter (1867 and 1954, respectively). The first empirical test of the relationship between financial development and economic growth is credited to Goldsmith (1969) and built upon by Shaw (1973) and McKinnon (1973). Despite evidence that the financial sector was an important driver of economic growth, most government finance policies of the 1960s and 1970s focused on channeling credit to industrial sectors that were deemed important (Berthelemy and Varoudakis 1996). The 1990s saw a renewed interest in financial market policy, no doubt inspired by an assortment of finance related crises. Debt crises in Latin America further highlighted the importance of mobilizing domestic resources and improving the financial market system.

These contemporary studies were initially conducted by Bencivenga and Smith (1991) and King and Levine (1993). Their research specifically used the level of financial development as the primary independent variable. Their results have been confirmed several times (Atje and Jovanovic 1993, Obstfeld 1994). Other recent studies on the topic include Levine and Zervos (1998) and Levine et al. (2000). The use of increasingly sophisticated statistical methods has allowed researchers to further substantiate that the dominant direction of causality runs from finance to growth (King

¹⁰ Perverse incentives produce an unintended negative consequence, and are incentives that have the opposite effect of what was intended.
There are several theories as to why financial development helps economic growth. The most prominent theory (and the theory of the above mentioned authors) is that financial development leads to a more efficient allocation of resources. Another idea is that the ability to spread risk can lead to investment in technology, and identify the most competitive projects, thereby resulting in higher growth. In some cases, informational asymmetry may be to blame for lower growth. Asymmetrical information leads to uncertainty among investors, and this can lead to credit rationing. Credit rationing holds back productive investment, and can potentially decrease the economic growth of a nation (Romer 1986). Financial market depth can help to eliminate the asymmetry, reduce the level of uncertainty, and work to prevent credit rationing. Finally, Rioja and Valev (2004) note that financial markets boost growth, but do so in different ways depending on the economic status of a nation. In wealthier countries it increases productivity, but in poorer nations financial markets boost capital accumulation. Aghion and Bolton (1997) find that in nations with high levels of capital accumulation, there is a trickle down effect to the lower income groups. Financial market development has also been shown to disproportionally benefit smaller firms (Love 2003, Beck et al. 2005). This is important because smaller firms are more likely to be owned and operated by lower income groups than larger corporations.

Contrary views are limited, but they do exist. Joan Robinson responded to Schumpeter’s arguments by saying that “where enterprise leads, finance follows.”
More recently, Lucas (1988) stated that finance was an over-emphasized variable in determining growth and Stern (1989) also dismisses the role of finance in explaining underdevelopment.

Financial Markets, Poverty Reduction and Human Capital

Financial market development may help to reduce poverty in several ways, and has empirically been shown to do so (Beck et al. 2006, Honohan 2004). First, making financial services available to a larger percentage of the population is an effect of financial development (Rajan and Zingales 2003). When these services are more readily available, the income of the lowest quartile of the population increases more than the rest of the population. Countries with better financial market development also saw lower income inequality as measured by the Gini index (Li et al. 1998). The theory is that financial market development reduces poverty and increases equality through two channels: promoting overall economic growth and changing the distribution of income. Credit constraints due to poor information and other market imperfections are especially “binding on poor entrepreneurs who lack credit histories, collateral, and connections” (Banerjee and Newman 1993; Beck et al. 2006, 2). Finally, low income saving is not often adequate to fully fund many high return activities, such as education, or investment in equipment to start or maintain a business. A more developed financial sector can help to alleviate these problems by spreading the risk around, and by providing capital to high yield activities that would otherwise not be funded. In addition, alleviating economic inequality can help the economy overall since a high level of inequality is associated with lower growth rates (Persson and Tabellini 1994).
Other research points to a positive relationship between financial market development and human capital (Benhabib and Spiegel 2000). It is thought that greater financial market development allows for greater investment in human capital when there are fewer constraints on borrowing for education (Jacoby 1994; DeGregorio 1996). In other words, having access to finance facilitates investment in human capital. In some cases, the accumulation of human capital occurs not just because of loans explicitly for education, but for physical capital that may allow households to be less dependent on child labor for survival. A recent cross national study found that the incidence of child labor is related to the degree of financial depth, even after controlling for overall economic development levels (Dehejia and Gatti 2002). In nations where financial depth is greater, students may be able complete more years of schooling and delay entry into the workforce.

Similar to the idea that finance can allow households to forego child labor, some have speculated that greater access to financial markets can allow households to avoid selling their productive assets when incomes temporarily fall (Altug and Miller 1990). This is known as income smoothing. Populations with low incomes tend to smooth their consumption by saving. This is accomplished by “mattress money”, or by purchasing items that will presumably hold their value, such as jewelry or livestock. Unfortunately, these mechanisms of saving are often inadequate to mitigate against the risk of economic shocks. These “shocks” such as the death of a primary earner, or the loss of a job can cause accumulated assets to be sold at “fire sale” prices well below their value, further diminishing the financial standing of the individual. In addition, inflation is a rampant virus in many emerging nations. Money held in mattresses, or hidden in a
home can rapidly devalue and is easily stolen. Financial market development can reduce liquidity constraints on households and provide a means for income smoothing by providing an alternative to these techniques (Jappelli and Pagano 1994). Insurance services can also protect individuals against potentially catastrophic losses of both personal business and primary earners.

Finally, financial market development can act as a check on monopolies within a society. It can facilitate the entry of competitors in the market, potentially undermine the power of dominant firms, and provide resources for smaller firms at a lower cost (Rajan and Zingales 2003). In the words of Honohan, “an underdeveloped financial system can be clubby, uncompetitive and conservative” (Honohan 2004, 5). Access to capital and the financial market system cab break up the dominant business structure in a nation and allow new entrants and technologies.

Contrasting arguments state that since the poor primarily rely on family or other informal connections for capital, changes in the financial sector primarily help the elite members of society (Haber et al. 2003). Another model shows a quadratic relationship between financial market development and inequality. In situations of low levels of overall development, only the wealthy can utilize the services whereas at middle and higher levels of economic development, a broader swath of the population benefits from these services (Greenwood and Jovanovic 1990). However, once financial market development reaches a very high level, the level of inequality again begins to increase.

In summary, there is evidence that financial market development reduces poverty directly by reducing income inequality through increased access to competitive financial markets. This allows lower income populations to invest in human capital, productivity
resources, and smooth their income. It also indirectly affects poverty by increasing economic growth levels overall. While there is some theoretical and empirical evidence that stands in opposition to these arguments, the majority of research upholds this relationship.

A Brief History of “Political Development”

The term political development has a plethora of meanings, and has been used is such a variety of contexts that its exact definition is unclear. Development can be defined as a “purposeful change that moves toward the attainment of a specific goal” (Palmer 1989, 7). The problem lies in describing the goal.

Early political development was primarily the domain of anthropologists and development was conceived as the shift from traditional societies to the modern state as the center of political arrangement (Palmer 1989). Political development as a separate field originated in the writings of Almond and Pye and the associated Social Science Research Council (Almond and Verba 1963; Pye and Verba 1965; Chilcote and Edelstein 1984). Early political development theory was influenced by modernization theory, first proposed in the late 1950s. Modernization theory placed an emphasis on economic development, urbanization, education, and the development of democracy as older social and economic structures broke down. While Lipset’s 1959 work focused on the connections between economic development and democracy, other development theorists saw social change as the main mechanism of modernization (Lerner 1958; Dahl 1961; Deutsch 1961; Cutright 1963). Almond and Powel also sought to define political development according to the level of specialization in a nation’s political institutions, and attempted to outline development as how well a political system
actually performed the tasks of aggregating interests and churning out policy (Almond and Powell 1966). Despite these efforts, by the end of the 1960s, political development theory had stalled.

Huntington was a major critic of modernization theory, and argued in *Political Order in Changing Societies* that economic development and urbanization was just as likely to cause political decay as political development (Huntington 1968). In fact, he saw rapid economic development as a major cause of political instability. Others argued that it was too ethno-centric and oriented toward Western ideas of “development.” At any rate, political development as a field lay dormant until the latest wave of democracies in the 1980s and 1990s revitalized the field, this time with an emphasis on democracy.

More recent studies of democracy have focused less on the preconditions for democracy than on growth, inequality and consolidation and stability (Weiner and Huntington 1987). The 1980s and 1990s saw a particular emphasis on capitalism and democratic development that was tied to the rise of neoliberalism. This was supported by studies showing that a market economy was a significant factor in explaining democracy, but distribution of income was not (Hadenius 1992). Others have tried to examine what the best systems incorporate, and what democracy is (Diamond et al. 1989; Vanhanen 1990; Vanhanen 2003) in a purely political sense, while still others are interested in the transition process itself (Haggard and Kaufman 1995).

A Conceptual Definition of Political Development

Scholars still struggle with defining political development, but it is possible to conceptualize what political development is. In the most basic sense, development
should include a form of democratic government that allows for broad participation by
the population with a competitive electoral environment and a high level of political
freedom and civil liberties protection. The government should enjoy popular legitimacy,
provide for an orderly transition of power, and have a degree of stability that will allow
the state to make credible commitments both to its domestic population and to the
international community. The quality of its institutions should be sufficient to adequately
address the needs of the society, and have sufficient conflict resolution mechanisms to
allow for problem solving within the political system. Along with this, the state must
have the capacity to implement its policies and enforce its decisions. In short, political
development is the process of change in the political system to reflect the above goals
of development and ultimately improve the quality of life for the population living in a
state.

Financial Market Development and Effects on the State

Earlier in this chapter, I discussed the relationship between financial markets and
economic development. In this section, I discuss the effects of financial markets on
democracy, social capital and participation and explain how deepening financial
markets can affect these in a positive way.

Democratic Development

Most political scientists agree on certain preconditions for democracy. Economic
development, lower levels of inequality, a strong middle class, a market economy and
cooperative elites are all desirable qualities (Vanhanen 1990). In this tradition, I argue
that financial markets affect democracy by improving the distribution of economic and
intellectual resources, strengthening the middle class, improving participation, and strengthening civil society.

Huntington, Vanhanen, and Dahl all specifically emphasize the role that equality of resources plays in democratization. Dahl (1989) writes about seven conditions that are necessary for polyarchy, a political system with some of the desirable characteristics of democracy. One of them is a dynamic pluralistic society in which wealth, income and status are distributed broadly among the population, not just the elite (Dahl 1989). Financial market development can create conditions conducive to democracy by spreading around economic resources through poverty reduction and greater income equality. Financial sector development accomplishes this by providing investment and services to a larger population. This contributes to a dynamic society and to political development by dispersing power and resources and preventing any one group from monopolizing power. Higher levels of financial development may also signify higher levels of market-orientedness, a requirement that Huntington states may be a necessary, but not sufficient condition for democracy.

I have already discussed the how financial markets can remove some of the barriers to human capital investment. The relationship between human capital and democratic development, however, needs to be addressed more fully. Lipset (1959) and Vanhanen (1990, 2003) both specifically cite improvements in human capital as a necessary and beneficial component to democracy. Not only does an increase in human capital lead to an increase in economic resources through growth, an increase in human capital can distribute intellectual resources throughout the population. Vanhanen considers resource distribution, including human capital resources, as
fundamental in the development of democracy (Vanhanen 1990, 50). When intellectual resources are distributed, there is a greater opportunity for political entrepreneurship and leadership to emerge from all groups, not just the elite. Thus, improvements in human capital and intellectual resource distribution contribute to the potential for political engagement and democracy.

Others, such as Arat, state that in order for democracy to persist states must maintain socio-economic rights along with civil rights (1988). Using her argument, financial markets can positively affect democracy by enhancing economic rights in a society, and creating opportunities for investment based on virtue of ideas rather than political connections. Providing access to capital and services for the broader population further entrenches these values.

A Stronger Middle Class

This relationship between capitalism and democracy is explored more fully in Rueschmeyer, Stephens, and Stephens. They conclude that capitalist development “is associated with democracy because…it strengthens that working and middle classes and weakens the elites” (1992, 7). Preceding them, Lipset (1959), along with Moore (1966), emphasize the role of a middle class in promoting democratic ideals. Vanhanen (1990) more broadly states that “the concentration and the distribution of political power depends on the degree of resource distribution. While he does not exclusively use economic resources, one can infer that access to capital and other financial resources are critical components of the broader resource base. He further elaborates on the how distribution of power resources must be constructed so that no one group can suppress another, or maintain hegemony. Wide distribution of resources allows more groups to
participate in the political sphere. Tilly (1978) and Eckstein (1982) both discuss how excluded populations, when given adequate resources, will challenge the polity rather than be passive victims.

We can tie the two ideas of resource distribution and class together to say that a broader distribution of resources strengthens the middle and lower classes. Financial market development strengthens the middle classes by extending economic opportunities previously reserved for elites to the whole population, and thus shifting the balance of power toward the middle classes. Eckstein (1982) also notes that as the level of competition increases within a state, so does the volume of demands and subsequent government output. This in turn may result in additional degrees of specialization in government institutions and demands for efficiency, another aspect of political development.

A weakened elite structure can cause instability, but this is not a certain outcome. In some cases, this is a positive event, and can lead to the cessation exploitative elite activity (Olson 1982). On the other hand, instability can cause hardship at all levels. Elites will be concerned when they perceive that the political changes will leave them worse off. With higher levels of financial market development, elites are placated by the improved growth and rising tide, so a source of grievance is removed – they are more likely to be cooperative. Thus, financial markets may decrease the instability that results from a stronger middle class and political changes by eliminating a potential threat to elite welfare while still strengthening the lower classes.
Participation

Political participation contributes to outlining the priorities and goals for society (Verba and Nie 1972, Verba et al. 1978). Increased participation by all population segments in a society results in a more representative set of goals for a nation, and insures that the true demands of a society will be heard. A population whose resources are more equitably distributed has a higher stake in the effectiveness of the government. Desire to protect these resources will result in a greater amount of participation in politics. Increased wealth and equitable distribution of resources will provide the means for many to have the luxury of participation, either through traditional mechanisms within the system, or protests and opposition outside the existing system.

While the necessary amount of participation needed in a society is under debate, there is no question that it serves a valuable purpose and is essential to political development. Recent literature notes the decline of traditional participation in Western democracies, such as voting, party membership, and union activity (Gray and Caul 2000, Mair 2001, Norris 2002, Gallagher et al. 2006). At the same time, people are increasingly participating in unconventional ways (Gallagher et al. 2006). Financial market development affects participation by increasing overall wealth, thereby increasing participation in both traditional and non-traditional activities, but may also increase non-traditional activities by providing the resources to stage these events.

11 Verba, Nie and Kim (1978) define participation to mean “legal acts by private citizens that are more or less directly aimed at influencing” the government (p1). I broaden this definition to include acts of protest, or other unlawful actions that are aimed at influencing the actions of the government. Verba and Nie (1972) do not make the distinction between lawful and unlawful participation.
Civil Society

Civil society is an interesting dimension of political development. It is not the state, nor does it aspire to become the state. It is not the market, yet it exerts influence in both politics and markets (Scholte 2000). Civil society is the space where the population can share experiences, promote their interests, and learn values of civility and build trust (Diamond 1994).

Civil society is usually considered an essential component to a viable democracy. Its effects on growth are more ambiguous. Knack and Keefer (2003) find that trust and the level of civic association are associated positively with growth, but that associational activity along is not. This is in stark contrast to Putnam’s 1993 study on civic organizations in Italy where he attributes some of the economic development to the strength of these organizations (Putnam 1993).

Increasing wealth and greater economic activities create new interests that have a stake in society. These new actors may organize to push for policies that are beneficial to their interests. Diamond (1994) stresses that civil society is autonomous from the state, voluntary and self-supporting. There are few studies that look at the effects of financial markets on civil society, but one paper hypothesizes that civil society is a way for groups to increase their access to financial resources and their effective use (Bebbington and Perault 1993). I argue that the inverse is also true: financial markets can facilitate the development of civil society by assisting with the financing of a group, and strengthening the capacity of a group through efficient use of economic resources and investment. It can also indirectly support civil society by increasing the amount of human capital within society. Finally, financial market development allows civil society
groups to exploit the resources that they have at hand in the best way possible, and facilitating the influence that the group may have on political discourse. An excellent example of this comes from the Ngai Tahu Maori group in the south island of New Zealand.\textsuperscript{12} This traditionally disadvantaged group used its limited economic base and the financial markets to create one of the largest corporations on the south island (Brown 2006).

As Verba, Nie and Kim note (1978), citizens who have a better education and a high income hold a disproportionate amount of influence over government.\textsuperscript{13} Along these lines, I have argued that financial market development can improve political development by improving the level of human capital, strengthening the middle classes by improving resource distribution and contributing to conditions that are thought to increase political participation, civil society, and democratic development.

Stability Arguments

Socio-political stability is a controversial topic in development. Huntington (1968) theorizes that rapid economic growth is inherently destabilizing, and that this can result in problems for a government. Instability can inhibit political development before a government is able to fully develop conflict resolution institutions (Huntington 1992). Adding to these ideas, Olson (1982) states that instability can be good for development because it breaks up the power structure, and allows a more efficient set of institutions to develop. In this section, I explain what is meant by stability, descant the political and

\textsuperscript{12} The specifics of this case are not provided due as the interview was conducted with the assurance of confidentiality.

\textsuperscript{13} It should also be noted that their study focused on more developed nations, and notes that the common factors may not be applicable to all developing nations.
economic effects that result from instability, and discuss how financial market
development can affect stability, for better or worse.

The institutions of a political system are generally designed to support the
continuation of the system since political systems act to preserve themselves (Haber
and Razo 2000). Change in a political system is the result of some internal or external
event that cannot be handled within the current institutional framework. In some cases,
this is a result of demands from the population that cannot be met under the system.
Haber and Razo (2000) define instability as “unfulfilled demands that trigger new
strategies of political organization that may seek redress outside the system (p 115).
Huntington (1968) notes that one of the primary problems in a developing society is that
development of political institutions tend to lag behind the rate of social and economic
change. When the institutions are unable to support the new groups that mobilize as a
result of rapid social and economic change, violence and instability may result.

One of the major causes of instability is deprivation, an idea closely tied to
inequality within a society. Economic development rarely affects all groups equally, and
some may feel particularly slighted by their lack of relative improvement. At the same
time, many economically developing nations are also developing politically and do not
often have sufficient conflict resolution mechanisms to deal with the discontent. The
groups then resort to strikes, riots, and other forms of protest against the government
creating a situation of instability. If there is sufficient income inequality, the
disadvantaged groups have little to lose by creating disruptions, and can potentially take
solace in the problems they have caused to the upper classes (Lichbach 1995). This
instability can lead to a vicious cycle where the instability limits the government’s ability
to implement policies that could address this inequality, a new government is installed to quell the unrest, but is not consolidated enough to solve the situation and quickly loses power and legitimacy, prompting a new cycle of instability to begin (Zak 2000). This cycle, when compounded by the loss of investment and economic growth, may result in a poverty trap.

Instability has an effect on economic growth, but the jury remains out as to the direction of long-term effects. Short-term instability does seem to have conclusively negative effect on growth (Skocpol 1979, Alesina et al. 1996, Alesina and Perotti 1996). The risky political environment discourages investment and lowers growth, but Alesina et al. (1996) admits that it is not clear if the lower investment and growth precedes the political instability. They also note that instability is much more common in lower income countries, and that rising income reduces the incidence of instability. Other arguments focus on savings, and theorize that instability breeds uncertainty. The lower savings resulting from this instability decrease the amount of capital accumulation and subsequently lowers growth (Venieris and Steward 1987). In the same study, the authors also observed that nations with low levels on inequality have very low levels of instability, regardless of income level. Instability further leads to uncertainty regarding the government’s ability to make long-term commitments, compounding the problem (Haber and Razo 2000). Investment may drop off because investors are uncertain if future governments will respect property rights, or uphold previous contracts as well as the immediate growth prospects for a nation.

Well-developed financial markets can affect stability by providing greater financial stability in a society through improved economic equality and poverty reduction.
Citizens behave strongly when their livelihoods, and physical quality of life are at stake. This is true regardless of socio-economic status. In some situations, the government instability may be caused by a nation’s elite, who are threatened by the potential effects of democratization and increased participation by the masses. Financial market development provides ample opportunities for elite gain, as well as middle class development. If the elite class feels that a system is working to their benefit (and financial markets usually do), then one potential grievance is eliminated. The effects of elimination of grievances by the citizens most empowered to create high-level instability should not be discounted.

Financial markets can reduce the incidence of instability by alleviating the conditions that lead to instability, but they can also limit the damage that results from unstable episodes. Independent financial markets can reduce the risks in way that government policy cannot: governments are incapable of reducing risk when it is itself the source of the risk. A properly functioning financial market takes these risks into account and they are anticipated and reflected, usually before the crisis occurs. Better developed financial markets also have greater opportunities for firms and individuals to reduce the consequences of instability. The variety of instruments available to savers and investors may allow them to hedge their investments by using instruments that are affected by instability in different ways. If investors feel that they can adequately protect themselves, they are less likely to reduce or revoke their stake, and keep the levels of investment stable thus limiting the negative economic effects. The average saver also benefits from this, as banks will hedge their risks and remain financially solvent.
Underdeveloped financial markets and limited or uncertain access to capital creates a greater sense of risk. This perception itself can create additional problems through bank runs (at the individual level) or speculative attacks (at the international level) when a financial system is seen as weak or risky. In this case, financial market development works like a vaccine to ward off attacks that might occur if the system was perceived as underdeveloped. When citizens of a country experience a bank run, or speculative attack, they begin to fear for their livelihood. Political institutions and politicians are often the targets of this fear and protests, strikes and other forms of unrest are seen. This feeds right back into the cycle of instability. A strong financial sector, by ensuring that financial transactions are outside of the realm of the state, means that political competition and infighting do not directly negatively impact investment.

The Institutional Effects

Many scholars place a primary emphasis on institutions as the most important indicator of how a nation will develop both economically and politically (North 1990, Rodrik et al. 2002, Knack and Keefer 2003, Rodrik 2004). To that end, no discussion about political development would be complete without an examination of the effects of financial market development and institutional development. In particular, I discuss how financial market development affects transaction costs and efficiency, corruption, and institutional change.

The first argument that can be made for financial markets comes from the transaction cost literature. Financial markets act as a mechanism to reduce transaction costs. When transaction costs are reduced, resources are allocated more efficiently,
including institutional resources. Efficiency alone is considered an institutional virtue, but financial markets have an impact in other ways.

Incomplete or underdeveloped markets are themselves inefficient, and result in a sub-optimal distribution of resources. For firms and individuals, the absence of financial markets leaves them with higher cost options for financial services. The lack of information available in the system may cause a considerable amount of uncertainty in a market, further driving up costs and shutting out smaller enterprises. When the cost of using the system becomes too high, individuals may seek lower cost alternatives outside the normal channels. Thus, they may seek special favors from politicians or others placed in positions of responsibility, or look to the informal economy for assistance. Under both of these scenarios, capital will be allocated not to the best projects, but to those with the best connections. Not only does economic growth suffer as a result, but this can solidify a system of patronage and corruption. This is in fact what Gerring and Thacker argue (2004). They also theorize that closed systems, where investors are dependent on the state rather than the market, are unlikely to criticize corrupt practices. Under a corrupt system, public goods are provided based on political need, rather than the needs of society (Root and Nellis 2000). If corruption is contained, the distribution of public goods may become more reflective of actual needs, and thereby serve to increase the responsiveness of the government.

Root and Nellis (2000) discuss how patronage systems create market distortions by creating informational asymmetries that favor the government. Political domination of the economic sphere leads to conditions that are conducive to corruption: government controlled banks, price controls and unrealistic barriers to transactions all create a
system in which consumers are at a disadvantage relative to the government, and where costs are likely to be much higher. This leads to further corruption, and a vicious cycle results. The elite may also pursue policies designed to extract maximum rent from a polity, and retain political power in the process resulting in inefficient institutions (Acemoglu and Johnson 2005). I argue that this can inverted, and that a strong financial market can be a component of a virtuous cycle of institutional development. A well-developed financial market relies on competitive private institutions to distribute capital resources rather than the government. Good financial markets have a large degree of accountability within their systems, and blatant corruption is more easily detected. The inherent accountability and transparency have the ability to remove the sometimes-perverse incentives that preserve bad policies, and maintain questionable policy makers. The reduced costs offered by a good market system also means that there is less need to circumvent the system, and firms may well find that corruption is the more expensive option. This can improve political development by helping to eradicate bad policy by removing the incentives for both supplier and consumer.

Finally, financial market development can affect institutions indirectly through increased participation. As mentioned earlier in this chapter, financial market development creates a stronger middle class with an interest in developing institutions that reflect their needs. These institutions tend to be more democratic, and reflect the needs of a broader base of constituents. In this way, financial markets not only decrease the opportunities for corruption and inefficiency, they create a stimulus for change in institutions to make them more responsive to society. This, combined with the improvements in resource allocation, can create a virtuous cycle where the middle
classes are being reinforced by the opportunities offered by good markets, demand changes in the political institutions, and those institutions reinforce the financial system by providing a solid environment for the market to flourish.

Potential Problems

No good theory chapter would be complete without an explanation of the potential shortcomings and problems present in the chapter. The most evident problem lies in the endogenous nature of the work. Additional challenges to the generalizability of the theory are present in the non-linear benefits of financial market development, and in the assumption that governments desire to improve and develop. Overcoming the “development trap” presents a final challenge to the idea that financial markets can positively affect political development.

Endogeneity

I have argued that financial market development affects political and economic development, and research using advanced statistical techniques has in fact shown that financial market development usually affects economic development more than economic development affects financial market development. At the same time, the level of economic growth does play a role in the overall conditions of a financial system. Without some economic base to work from, there is little reason to have a well-diversified and deep financial system.

The situation is even more problematic when the dependent variable is political development. Since markets are uniquely tied to the state, and the state provides the conditions that allow financial markets to deepen (e.g. contract enforcement, property rights, financial repression laws), the governmental institutions can affect financial
market development just as surely as they affect other aspects of development. As was the case with economic development, a methodologically sophisticated study by Dehejia and Gatti (2002) examined the direction of the relationship between political institutions and financial market development in an attempt to isolate the factors of economic development. They found that none of the political institutional variables were significant in explaining financial development, but that the amount of private credit was significant in explaining the political institutional changes. In another study, the endogenous nature of transaction cost was used to explain why the relation between economic growth and political institutions is so difficult to dissociate. The political institutions themselves are often a source of transaction costs, as a quick look at the number of forms required to start a business in Latin America will attest.¹⁴ Yet lower transaction costs are a tremendous benefit to political development, and economic development in general.

Despite this limited evidence, the financial system does acquire its relevance from the political system, and the agents acting in these markets take political factors into account when making financial decisions. While new statistical methods can take the endogenous nature of the model into account, the implications of this are important, and must be carefully considered when conducting an analysis of this relationship. Variation in financial market development likely explains some of the variation in political and economic development. At the same time, the political and economic conditions of a nation are inherently tied into the level of financial market development and need to be considered when modelling these dynamic relationships.

¹⁴ The highest levels of bureaucracy are found in Latin America and Africa, with an average of 10.2 and 11.1 procedures, respectively. Source: IFC, 2006.
Non-Linear Benefits

Given how financial markets affect development, it is logical that the effects differ depending on the level of development, or in other words, that the effects do not affect nations in the same way. There must be some minimum level of economic activity and state capacity before a financial system can operate. At the other end, the most highly developed financial markets also exist in the most politically developed nations. One might expect that the effects of financial market development would be smaller in both of these cases, albeit for different reasons.

A few papers address the non-linear aspects of financial market development on economic growth. Patrick (1966) theorizes that financial market development is at first supply leading, and then demand driven, and uses this as an explanation for his hypothesized differences in effect. At the time, there were not sufficient methodologies to test his hypothesis, but Rioja and Valev (2004) do just that. They find that financial market development does affect economic growth differently depending on the level of development. In poorer nations, finance boosts growth by increasing and accelerating capital accumulation, but in wealthier nations, higher levels of financial depth increase productivity. A second paper by these researchers further establishes the non-linear relationship between financial market development and economic growth. It follows that the effects of financial market development will likely be strongest in the middle-income or emerging market nations that are neither extremely poor nor highly developed.

Another non-linear aspect of this research comes from the temporal realm. The effects of financial market development may also vary across time as well as nations. Calderon and Liu (2003) examine this, and find that as time goes on, the impact of
financial market development increases. This is in keeping with Schumpeter’s original research that stated that it could be up to thirty years before the full effects of financial market development were seen in economic growth. There is much to suspect that the same would hold for political development as well as economic development, and I will test for non-linear effects in my analysis.

Desire for Development

All theories look much rosier if we assume that all leaders are benevolent, and have the best interest of their respective countries in mind. History has show that this is not a valid assumption. A government that sees large material benefits from the current system is unlikely to implement reforms that could undermine their interests. While this is an acknowledged problem, it should not prevent us from examining the potential effects and trying to develop policies and methods that could improve the economic and political prospects for a nation.

The Underdevelopment Trap

Another compelling challenge to political development is the poverty trap, or underdevelopment trap that is often witnessed among developing nations. The low income level and institutional dysfunction of some nations prevents financial deepening from occurring, and poverty continues (Berthelemy and Varoudakis 1996). Saint-Paul (1996) also notes that multiple equilibria can be found in financial market development. A nation may get stuck in an equilibrium of income and financial market development but not be able to shift to a higher level of development. In these cases, some exogenous force would need to be applied in order to break out of these traps. This might come in the form of foreign investment, international bank loans, or even
international pressure to reform a particular institutional element that is seen to be stymieing the process.

Theoretical Summary

In this chapter, I have argued that financial market development leads to political and economic development, and that the effects are non-linear and likely to be concentrated in middle income and emerging economies. Financial market development affects economic and political development by increasing the overall level of growth, reducing inequality, and decreasing the level of poverty within a nation. A stronger middle class results from the economic improvements and improvements in the level of human capital. All of these are conditions that are conducive for democratic development. Financial market development may also increase political participation and strengthen civil society since improved economic conditions at the lower and middle-income levels give individuals an incentive as stakeholders to participate in government and society. Further, an increase in intellectual and financial resources will allow people to participate more fully in the political process.

Financial market development may also mitigate some of the negative aspects of instability that can result from a shift in the balance of power from elites to the middle class, and from economic and political change by eliminating grievances of the elite. Improved equity of resource distribution may also alleviate some of the relative deprivation that can cause instability. Finally, financial market development can create a virtuous cycle of institutional development by removing some of the opportunities for corruption, and eliminating some of the perverse incentives that maintain a patronage system.
Hypotheses

From this theory, several hypotheses can be derived, and are shown below. The following chapter presents the operationalization of these variables, and outlines the methodology used to test the hypotheses.

H1: Financial market development will lead to higher levels of economic growth.

H2: Financial market development will lead to higher levels of human capital.

H3: Financial market development will decrease the level of poverty in a nation.

H4: Financial market development will increase the level of income equality within a nation.

H5: Financial market development will increase participation in the political sphere.

H6: Financial market development will increase the degree of civil society within a nation.

H7: Financial market development will decrease the amount of corruption in a nation.

H8: Financial market development will increase the amount of political competition within a nation.

H9: Financial market development will increase the amount of democracy present in a nation.

H10: Financial market development will improve the quality of government institutions within a nation.

H11: The effects of financial market development will be strongest in middle-income nations.
CHAPTER 4
OPERATIONALIZATION AND MODEL SELECTION

Introduction

The previous chapter detailed my theoretical approach, and described the causal mechanisms between financial market development and political and economic development. This chapter details the operationalization of the concepts discussed, and presents the methodology used to test the hypotheses. First, I present a conceptual description of each variable followed by an explication of the operationalization. Next, I provide a summary of the data themselves. A discussion of panel data techniques follows, along with the appropriate diagnostic test results. I then present the final model specification for testing the hypotheses. All results are presented in Chapter 5.

Operationalization

In chapter 3, I discussed the concepts of political development and financial market development. While the concepts of a given variable are usually comprehensive, data limitations often affect the operationalization process. The following section explains my choice of data, and the benefits and problems present with each measure. The descriptive statistics and correlation matrix are shown in Table 4.1 and Table 4.2.

A persistent problem in the social sciences is the lack of “perfect” measures and data (and in many cases, the absence of even reasonably good data). Particularly when dealing with abstract concepts such as “democracy” and “institution,” the data may vary depending on the operationalization and measurement. There are multiple sources of measurement error; governments may incorrectly report figures, or not report them at all. Measures are often based on subjective perceptions and surveys, and even
hard measures such as dollar value may not reflect the actual usage and conditions of the measure. In order to combat these problems, I use multiple indicators whenever possible, and employ statistical tests for measurement error and bias.

Data Summary

The data tested in this chapter include 190 countries from 1975-2003. The unit of analysis is the country-year. All countries and regions are included, provided data were available.\textsuperscript{15} The sample begins in 1975 due to the availability of financial data. All descriptive statistics, correlations and the codebook for the dataset are in Tables 4.1, 4.2, and Appendix D, respectively. In several instances (particularly with the states of the former Soviet Union), data do not begin in 1975. In these cases, the data begin with the year of transition, or creation of a new state. Similarly, states that cease to exist during the study period are included, but the data terminate when the state no longer exists. Data are not calculated for the Soviet Union or other centrally planned economies since traditional financial market structures did not exist. In these cases, countries are analyzed using the available data from the time of economic transition.

Dependent Variables – Political and Economic Development

In my hypotheses, I use several dependent variables as proxies for political and economic development. Where possible, I use multiple indicators to provide the greatest possible insight into the effects of financial market development. The following

\textsuperscript{15} Small island nations, principalities and disputed territories are treated differently by different variables. For some measures, such as Polity, Taiwan is treated as a separate nation while in others, like Vanhanen, it is not. Several of the small island nations like St. Kitts do not have financial data available. All of these nations and territories are given a reference number, and they are included in their analysis when the data permits. In most cases, however, they are dropped from the analysis.
is a list of those variables and their measurement. They are presented in the order in which they appear in the hypotheses.

*Economic Growth* – I use two measures of economic growth to test my hypotheses. First, I use the growth in overall gross domestic product (GDP) measured as the percentage of annual change in GDP. This measure is also used as a control variable in the other hypotheses. I also measure economic growth as the change in GDP per capita to account for changes in the size of the population. The source of both indicators is the World Bank’s World Development Indicators dataset, and the data are complete for all the nations in the dataset (World Bank 2006).

*Human Capital* – Human capital has qualitative and quantitative elements, and measurement can be problematic. It tries to capture education, health, training, and other factors that influence an individual’s productivity in society (Laroche et al. 1999; Kiker 1966; Becker 1962). Operationalizing at the aggregate level, some studies have used literacy, educational enrollment, and educational attainment to quantify human capital levels (Barro 1991; Romer 1989; Koman and Marin 1997). Unfortunately, data are often sparse, and these measures do not always reflect the true level of human capital in society.

In this study, I use the percentage of the population enrolled in tertiary education (beyond high school). While the percentage of the labor force with a tertiary education can also be used, the data are more complete for tertiary enrollment. Tertiary enrollment also includes the rate of education for the whole population, not just the labour force, and may be a more theoretically sound measure. While human capital encompasses a great deal more than literacy and education, I argue that the distribution of intellectual
capital is an important mechanism in political development. Thus, using educational measures can more accurately represent this concept than health care spending or other commonly used indicators. The percentage of the population enrolled in tertiary education is drawn from the World Development Indicators.

**Poverty** – The level of poverty in a nation can be difficult to determine. Governments are often loath to reveal accurate figures, and may deny them to international organizations. The World Development Indicators are the most consistently estimated data, and are available for the largest number of country-years. Poverty is calculated as the percentage of the population living on less than $2 per day (data are not compiled for Organization for Economic Cooperation and Development (OECD) nations), and utilize purchasing power parity values. Since the data are not collected annually, I linearly interpolate the missing values. In the cases of poverty and income inequality, dramatic shifts in value from year to year are improbable. Even in the event of a major economic catastrophe, such as hyperinflation, a shift in poverty is likely to be recorded in the next reporting period. Since the gap in reporting periods is not greater than six years, linear interpolation is an appropriate remedy for missing data. For all poverty measures, a higher value indicates greater poverty.

**Income Inequality** – This is a measure of the disparity of income within a population. The Gini coefficient is traditionally calculated as the ratio between perfect income distribution and the Lorenz curve in a nation. Like poverty values, the Gini coefficient of income inequality is not reported annually and I have calculated missing values using linearly interpolation. These data are drawn from the World Development Indicators. A score of 0 indicates perfect income equality, where everyone has the
same income, and a score of 1 indicates perfect income inequality. I multiply this value by 100 to get a percentage value, known as the Gini index.

*Political Participation* – A higher level of participation indicates that people are engaged in the political process and that their needs and desires are being considered by the system. In other words, if people are participating in government, then they see the government as being a good outlet for their demands, and are likely to see government institutions as legitimate, or at least the best place to voice their demands.

I utilize Vanhanen’s measure of participation as the measure of political participation in this study as it is calculated consistently across countries, and is available for more time periods than other participation measures (Vanhanen 2003). Participation is calculated as the percentage of the total population that votes in an election. It is important to note that his calculation is not based on the number of eligible voters, but total population. In some ways, this is logical, as a country where only land-owning males could vote, calculating the percentage of eligible voters would be somewhat misleading. On the other hand, in countries with a large population under 15 (as is the case in some sub-Saharan African nations), the numbers may be artificially small as children do not usually vote.

*Corruption* – In this study, I use the measure of corruption from the Governance Matters IV dataset. This indicator “measures the exercise of public power for private gain, including both petty and grand corruption and state capture.” (Kaufmann et al. 2005). The corruption indicator is survey-based and includes both “the frequency of additional payments to get things done” as well as the tendency for the elite to engage in state capture (p. 131)
The correlation between Transparency International (another frequently used indicator of corruption) and the Governance Indicators is extremely high (Pearson’s r=0.96) perhaps due to the fact that the Governance Indicators use the Transparency data as part of their measure. Since the Governance Indicator is available for more countries, I utilize this measure in my analysis. Figures are reported every two years, so missing values are linearly interpolated. The data begin in the year 1996, and higher values indicate lower levels of corruption.

Political Competition – The notion of competition is interesting as an indicator of political development because competition may indicate the degree of representation within a nation. A more competitive system will present the electorate with a greater number of choices, and a greater likelihood that their interests will be considered. Examining the level of competition within the system may also indicate the amount of accountability in the system, as a more competitive system is likely to be more responsive to the population.

I use two different measures of political competition to test my hypotheses. Polity’s competition measure is a composite measure made up of the score from the regulation on participation and the competitiveness of participation (Gurr et al. 2006). Polity’s measure ranks from 1 to 10, with higher scores representing greater levels of political competition. Vanhanen’s competition index calculates the percentage of seats won by the largest party and higher values indicate a lower level of competition. The theory behind this is that a more competitive system will have a larger number of smaller parties represented, or in the case of a two-party system, the level of competition between the two will be sufficiently strong that one party will not dominate
the system. These measures examine slightly different aspects of political competition, and together will provide a more complete portrayal of political competition. The two measures have some degree of correlation (r=0.62), but measure slightly different phenomena. The Polity measure is a “harder” institutional measure, while the Vanhanen measure looks at the outcome of the competition. Therefore, using both measures is appropriate.

*Democracy* – No indication of political development would be complete without an examination of the level of democracy itself. Operationalizing democracy, however, is a difficult task and made even more so by the lack of a universal definition of democracy.

Robert Dahl (1971) includes two theoretical dimensions to democracy: the right to participate, and the presence of competition. Hartlyn and Valenzuela (1994) include constitutionalism in addition to competition and participation. Linz and Stepan (1996) broaden their conceptualization even further, and describe five areas of democracy that include civil society, rule of law, effective bureaucracy, political competition and economic freedom. Operational indicators of democracy tend to result in either institutional measures that seek to quantify institutions objectively or measures that try to assess the “squishier” quality of rights protection. In order to capture as many elements of democracy as possible, I use three indicators of democracy: Freedom House’s measures of civil and political freedom, Vanhanen’s index of democratization, and the Polity IV measure of democracy.

Vanhanen’s measure is based on his scores of participation and competition (Vanhanen 1990, 2003). The competition score is calculated as the percentage of
seats won by the largest party and he calculates participation as the percentage of the total population that votes in an election. Both the participation and competition figures are multiplied together, and then divided by 100 to construct Vanhanen’s index of democracy. The democracy scores do have a fairly high degree of correlation with the competition measures, particularly between the Vanhanen competition measure and Vanhanen’s democracy measure (r=0.91). However, these two measures do not appear in the same model, so multicollinearity is not a concern. For participation, this is less of a problem as the correlation between measures never exceeds 0.50.

The Freedom House measure is constructed of a seven-point scale in each of two categories. The political rights category measure considers the ability to participate freely in the political process, including "the right to vote, run for public office, join political parties and organizations, and elect representatives who have a decisive impact on public policies and are accountable to the electorate" (Freedom House 2007). Freedom of expression, associational rights, rule of law and personal integrity comprise the civil liberties category. The ratings are assigned by a team of country experts.

The Polity IV dataset constructs a democracy score and an autocracy score for each country-year, and these are based on the regulation and competitiveness of political participation, the regulation and competitiveness of executive recruitment, and constraints on the executive branch. These scores range from 0-10, and a combined Polity score is computed by subtracting the autocracy score from the democracy score. The scores range from -10 (highly authoritarian) to +10 (strongly democratic).

For methodological purposes, I utilize a standardized scale of each measure; the reported value for each observation is rescaled to 100 points and higher values indicate
greater democratic qualities. Vanhanen’s index and Polity are institutional measures, while Freedom House is associated with rights protection. All three measures correlate highly, with a correlation coefficient above 0.75. Despite this correlation, each measure depicts a different conceptual element of democracy. Since financial market development may affect these elements differently, I use all three measures to ensure that the broadest possible range of democratic activity is tested.

_Institutional Quality_—Institutional quality is one of the most difficult variables to operationalize. Most scholars recognize the primacy of institutions in some fashion or another. Yet there is no consensus of what particular institutions are important, nor is there agreement on what we should be measuring.\(^{16}\) Common measures include survey-based data on rule of law (Kaufmann et al. 2002) and the perception of corruption (Transparency International). Other measures focus on more formal institutions and rules such as electoral laws (Persson et al. 2003), judicial independence (LaPorta et al. 1997, 1999) and difficulty in changing policy (Henisz 2000).

Another difficulty with operationalizing institutions is that they are notoriously endogenous to political and economic development (Rodrik 2006, Woodruff 2006). Glaeser et al. (2004) note that the measurement of institutions overall is an inherently flawed exercise, something that Rodrik himself seems willing to admit (2006). They argue that institutional analysis is inherently flawed because most measures of institutions actually look at institutional outcomes rather than the institutions themselves. Despite these shortcomings, institutional quality is of sufficient importance that it must be considered in any data analysis.

\(^{16}\) A nice summary of these arguments are presented by Christopher Woodruff’s manuscript entitled “Measuring Institutions” (2006).
For purposes of this study, institutional quality is conceptualized as the efficiency in which a nation operates, or how well it takes the demands of society and implements policies that reflect those demands. I use two measures of institutional quality that are taken from the Governance Matters IV dataset: the effectiveness of the bureaucracy and the amount of unnecessary regulation. Electoral institutional measures, such as Polity, are accounted for in other areas of this study. Data availability prohibits the use of other measures. Both of the institutional measures are based on survey data, along with other information. The survey respondents include international organizations such as the development banks, and additional information comes from commercial consultancies and academic and university datasets. The data are collected by the World Bank every two years beginning in 1996, and I linearly interpolate the missing values.

Government effectiveness is calculated based on survey responses to the quality of public service, the competence of bureaucrats, and the independence of civil service decision making from political pressure. The main focus of the indicator is on “the ability of the government to produce and deliver public goods” (Kaufman et al. 2003, 130). The regulatory burden measures “the incidence of market-unfriendly policies” (Kaufman et al. 2003, 4). In general, these policies include price controls, policies that are perceived to be a hindrance to business, and policies that are perceived as excessive government regulation. Other regulatory policies may be included in this measure on a country by country basis.

**Overall Political Development** – Using factor analysis, I determined the principle components of each of the individual political development variables (see Appendix C),
and explored the possibility of creating a composite political development variable. Factor analysis, however, showed that the standardized Polity measure adequately captured all the elements of political development, and that the inclusion of additional variables would not provide any greater explanatory power. In addition to serving as a proxy for democratic development, I use the standardized Polity score when a control for political development is needed.

Independent Variables - Financial Market Development

Like political development, financial market development can encompass many different elements. Financial market development is conceptualized as its efficiency in distributing information, amelioration of transaction costs and its ability to allocate and mobilize capital.

Beck et al. (2004, 2005) use a measure of private credit within a given country as a measure of financial market development. This is the value of private credit issued by financial intermediaries within a country as a percentage of those countries GDP. This excludes credits issued by the central banks or other development banks, and excludes credit issued to the government, the public sector, state-owned enterprises, or transfers between financial intermediaries. Essentially, what this attempts to measure is the amount of capital that can be used by private business and individuals for non-governmental use. Furthermore, the private credit measures attempt to include credit issued by all financial intermediaries/institutions, not just traditional deposit banks. It does not, however, include measures of the amount of capital that is transferred through informal sectors such as intra-family lending or private loans made through non-financial
lenders (i.e. your local loan shark). Despite this, it is a fairly comprehensive measure of the amount of capital available within a given society for private use.

Other literature has used private credit as a proxy for financial market development, including Levine (1996, 1997, 2005), Levine, Loyoza and Beck (2000), King and Levine (1993), and Dimurgic-Kunt and Levine (2001). The original King and Levine article was the precursor for the Financial Structure Database (Dimurgic-Kunt and Levine 2001), the source of the data in this analysis. All the data were calculated based on reported values in the International Financial Statistics database from the International Monetary Fund.

All Private Credit – The Financial Structure Database contains several indicators of private credit within the dataset, including the total amount of private credit within the system, the amount of private credit issued only by banks, and the total volume of financial system deposits. All three measures correlate highly (see Table 4.2). Since I am interested in the total amount of credit within the system, it makes sense to use all private credit as my main independent variable of interest. However, the hypotheses are tested with all three measures as a check on the results.

The private credit variable is calculated as a percentage of the total private credit from all financial institutions (including banks, savings and loans, and other financial institutions) to GDP. In the sample, the range of private credit as a percentage of GDP is from zero to 180.

Insurance - My theory states that one of the ways financial market development acts on the political development of a nation is by strengthening the middle class and providing a buffer against economic hardship. Insurance in particular is a way for
individuals to protect their assets and businesses against catastrophic loss. Insurance
development is also thought to be related to GDP growth (Beenstock, Dickinson, and
Khajuria 1988). Therefore, I would be interested to see if the level of insurance
penetration in a market has an effect by itself. The Financial Market Database has two
measures of insurance penetration: the volume of life insurance premiums in a society
and the volume of all other, non-life insurance premiums. However, the data are largely
incomplete, and biased toward nations with better reporting systems (essentially, the
OECD nations along with a few others). While this would make an interesting addition
to the analysis, the limited and biased nature of the available data would make any
results highly suspect. Until better data is available, this variable remains in the realm
of future research.

Control Variables

*Inflation* – Inflation is included as a control since Rousseau and Wachtel (2000)
suggests that the positive effects of financial market development are much weaker in a
highly inflationary environment. Khan (2002) finds support for Rousseau and Wachtel,
and also adds that the threshold for inflation is about 36% annually before it affects
financial and economic development. Correlation tests reveal that there is little direct
correlation between inflation and other indicators in my dataset. Since inflation can be
defined in several different ways, this research uses the World Bank’s standardized
measure of inflation from the World Development Indicators, and is reported as the
annual percent change in consumer prices.

*Foreign Direct Investment Inflows* – Foreign direct investment (FDI) measures
the amount of foreign capital invested in a nation during the year. This is included as a
control since one could argue that nations with higher levels of foreign direct investment might have higher levels of political and economic growth regardless of the level of financial development. Similarly, one could argue that investment itself could be a driver of political and economic development. I use the World Bank’s data on foreign direct investment inflows into a nation, calculated as a percentage of net FDI inflows to GDP.

*Public Debt* – Debt is measured as the total dollar amount of central government debt as a percentage of GDP. Using the percentage of GDP rather than the actual dollar amount allows us to compare debt levels across countries while taking into account the relative size of the economy. Unfortunately, these data are highly selective, reporting is inconsistent, and several large nations (Argentina, for example) do not report this figure. Despite the selectivity of data, debt is included as a control since nations with high levels of debt are often besieged with economic crises and political instability resulting from high debt levels. Data were obtained from the World Development Indicators.

*Trade* – Trade is measured by the trade volume of a nation expressed as a percentage of GDP. Similar to foreign direct investment, trade may affect the level of economic development, income inequality, and financial market development. Data were obtained from the World Development Indicators, and are fairly complete over the panel. The correlation between trade and foreign direct investment was sufficiently small ($r=0.34$) to warrant inclusion of both variables.

*Population* – This is measured as the total population of a nation. Due to the extreme variation in national populations, the natural log of national populations is used in the analysis to correct for the likelihood of overweighting certain values.
size is usually included in political and economic analysis to ensure that development is not a function of the literal size of the nation. The data are complete over the panel and were obtained from the World Development Indicators.

*Income Dummy* – This variable classifies nations by income according to the World Bank. This measure is used to separate the data into strata by income level for additional analysis. A nation is categorized as a 1 if it is low-income, 2 for lower middle income, a 3 for upper middle income, and a 4 for high income nations. The World Bank does not classify the OECD nations, so they are incorporated in the high income category. Appendix A lists the nations in each category.

*Regional Dummy* – Each country was assigned one of eight regional codes (North America, Latin America, Western Europe, Eastern Europe and Russia, the Middle East and North Africa, sub-Saharan Africa, East Asia and the Pacific, and South Asia). Like the income dummy, this measure is also used to separate the data for regional analysis. Appendix B lists the regions and included countries.
Table 4.1 Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observations</th>
<th>Number of Countries</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Countries</td>
<td></td>
<td>190</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Political Indicators</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polity</td>
<td>4642</td>
<td>159</td>
<td>39.209</td>
<td>42.136</td>
<td>0.000</td>
<td>100.000</td>
</tr>
<tr>
<td>Freedom House</td>
<td>5481</td>
<td>190</td>
<td>58.934</td>
<td>29.286</td>
<td>14.300</td>
<td>100.000</td>
</tr>
<tr>
<td>Vanhanen</td>
<td>3154</td>
<td>165</td>
<td>31.944</td>
<td>22.735</td>
<td>0.000</td>
<td>100.000</td>
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<tr>
<td>Competition-Vanhanen</td>
<td>3169</td>
<td>164</td>
<td>42.262</td>
<td>20.468</td>
<td>0.000</td>
<td>70.000</td>
</tr>
<tr>
<td>Competition-Polity</td>
<td>4642</td>
<td>159</td>
<td>5.057</td>
<td>3.776</td>
<td>1.000</td>
<td>10.000</td>
</tr>
<tr>
<td>Participation</td>
<td>3630</td>
<td>171</td>
<td>38.027</td>
<td>16.266</td>
<td>0.000</td>
<td>74.000</td>
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<td>Corruption</td>
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<td>183</td>
<td>-0.024</td>
<td>0.971</td>
<td>-1.890</td>
<td>2.580</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>1242</td>
<td>183</td>
<td>-0.047</td>
<td>0.949</td>
<td>-2.580</td>
<td>2.590</td>
</tr>
<tr>
<td>Regulation</td>
<td>1250</td>
<td>183</td>
<td>-0.035</td>
<td>0.952</td>
<td>-3.990</td>
<td>2.270</td>
</tr>
<tr>
<td>Economic Indicators</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Change in GDP</td>
<td>5049</td>
<td>180</td>
<td>1.524</td>
<td>6.372</td>
<td>-52.100</td>
<td>100.830</td>
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<tr>
<td>Change in GDP Per Capita</td>
<td>4954</td>
<td>180</td>
<td>20.246</td>
<td>1957.470</td>
<td>-4757.300</td>
<td>3393.000</td>
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<tr>
<td>FDI</td>
<td>4047</td>
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<td>1.966</td>
<td>5.308</td>
<td>-82.811</td>
<td>145.132</td>
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<td>Inflation</td>
<td>3853</td>
<td>147</td>
<td>52.459</td>
<td>539.212</td>
<td>-21.675</td>
<td>23773.130</td>
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<tr>
<td>Debt</td>
<td>651</td>
<td>100</td>
<td>118.742</td>
<td>1503.381</td>
<td>0.210</td>
<td>38397.320</td>
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<tr>
<td>Trade</td>
<td>4208</td>
<td>154</td>
<td>67.939</td>
<td>37.591</td>
<td>1.531</td>
<td>280.361</td>
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<td>Social Indicators</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population (logged)</td>
<td>4736</td>
<td>158</td>
<td>15.925</td>
<td>1.551</td>
<td>11.716</td>
<td>20.978</td>
</tr>
<tr>
<td>Tertiary Education</td>
<td>732</td>
<td>152</td>
<td>26.239</td>
<td>21.991</td>
<td>0.279</td>
<td>95.211</td>
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<td>Poverty $2/day</td>
<td>1068</td>
<td>99</td>
<td>38.467</td>
<td>28.831</td>
<td>2.000</td>
<td>94.350</td>
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<tr>
<td>Gini Coefficient Value</td>
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<td>124</td>
<td>42.075</td>
<td>9.633</td>
<td>20.960</td>
<td>74.330</td>
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*Table 4.1 continues on next page*
Table 4.1 Continued

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observations</th>
<th>Number of Groups</th>
<th>Mean</th>
<th>St. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
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<tr>
<td><strong>Financial Indicators</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Credit - All institutions</td>
<td>3829</td>
<td>157</td>
<td>0.368</td>
<td>0.328</td>
<td>0.000</td>
<td>1.806</td>
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<td>Private Credit - Banks</td>
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<td>0.320</td>
<td>0.282</td>
<td>0.000</td>
<td>1.650</td>
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<tr>
<td>Financial System Deposits</td>
<td>3836</td>
<td>157</td>
<td>0.392</td>
<td>0.408</td>
<td>0.000</td>
<td>7.810</td>
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<tr>
<td>Life Insurance Premiums</td>
<td>1766</td>
<td>87</td>
<td>0.018</td>
<td>0.026</td>
<td>0.000</td>
<td>0.284</td>
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<tr>
<td>Non-life Insurance</td>
<td>1198</td>
<td>87</td>
<td>0.020</td>
<td>0.022</td>
<td>0.001</td>
<td>0.399</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Indicators</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Income (1)</td>
<td>1855</td>
<td>32.01</td>
</tr>
<tr>
<td>Lower Middle Income (2)</td>
<td>1626</td>
<td>28.06</td>
</tr>
<tr>
<td>Upper Middle Income (3)</td>
<td>992</td>
<td>17.12</td>
</tr>
<tr>
<td>High Income (4)</td>
<td>1322</td>
<td>22.81</td>
</tr>
<tr>
<td>Total</td>
<td>5795</td>
<td>100.00</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America (1)</td>
<td>70</td>
<td>1.21</td>
</tr>
<tr>
<td>Latin America and Caribbean (2)</td>
<td>1082</td>
<td>18.67</td>
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<tr>
<td>Western Europe (3)</td>
<td>744</td>
<td>12.84</td>
</tr>
<tr>
<td>Eastern Europe, Russia, Central Asia (4)</td>
<td>516</td>
<td>8.90</td>
</tr>
<tr>
<td>Middle East and North Africa (5)</td>
<td>635</td>
<td>10.96</td>
</tr>
<tr>
<td>Sub-Saharan Africa (6)</td>
<td>1568</td>
<td>27.06</td>
</tr>
<tr>
<td>East Asia and the Pacific (7)</td>
<td>911</td>
<td>15.72</td>
</tr>
<tr>
<td>South Asia (8)</td>
<td>269</td>
<td>4.64</td>
</tr>
<tr>
<td>Total</td>
<td>5795</td>
<td>100.00</td>
</tr>
<tr>
<td>Overall GDP Growth</td>
<td>GDP Per Capita Growth</td>
<td>Tertiary Enrollment</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Overall GDP Growth</td>
<td>1.00</td>
<td>GDP Per Capita Growth</td>
</tr>
<tr>
<td>GDP Per Capita Growth</td>
<td>0.34</td>
<td>Tertiary Enrollment</td>
</tr>
<tr>
<td>Poverty</td>
<td>0.26</td>
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</tr>
<tr>
<td>Inequality</td>
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<td>0.05</td>
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<tr>
<td>Participation</td>
<td>0.12</td>
<td>0.14</td>
</tr>
<tr>
<td>Corruption</td>
<td>-0.27</td>
<td>0.22</td>
</tr>
<tr>
<td>Competition - Vanhanen</td>
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<td>0.44</td>
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<td>Competition - Polity</td>
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<td>0.30</td>
</tr>
<tr>
<td>Vanhanen</td>
<td>-0.01</td>
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</tr>
<tr>
<td>Polity</td>
<td>-0.04</td>
<td>0.39</td>
</tr>
<tr>
<td>Freedom House</td>
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<td>0.41</td>
</tr>
<tr>
<td>Gov't Effectiveness</td>
<td>-0.21</td>
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</tr>
<tr>
<td>Regulation All Private Credit</td>
<td>-0.12</td>
<td>0.34</td>
</tr>
<tr>
<td>All Private Credit</td>
<td>-0.15</td>
<td>-0.18</td>
</tr>
<tr>
<td>Inflation</td>
<td>-0.17</td>
<td>-0.12</td>
</tr>
<tr>
<td>FDI</td>
<td>0.03</td>
<td>0.12</td>
</tr>
<tr>
<td>Debt</td>
<td>0.02</td>
<td>-0.28</td>
</tr>
<tr>
<td>Trade</td>
<td>0.04</td>
<td>0.33</td>
</tr>
<tr>
<td>Population</td>
<td>0.19</td>
<td>-0.18</td>
</tr>
</tbody>
</table>
The data are combined into a panel dataset. There is some semantic discussion as to whether larger time periods for many countries actually constitute panel data or time-series cross-sectional (TSCS) data. Beck and Katz (2004) argue that there are differences between the two and that panel data generally has a shorter time period than TSCS data. With a time period of 28 years, Beck and Katz would likely classify these data as TSCS. However, the number of countries is still larger than the number of time periods, and therefore I refer to the data as panel data for the duration of this study.

Panel data have several advantages over pure cross-sectional and pure time-series data. First, panel data can allow the research to take into account the heterogeneity of units over time (Gujarati 2003). In other words, panel data permit the examination of countries over time, and take into account differences between individual countries. Panel data also includes changes over units (in this case, countries) over time, giving a better picture of the dynamics of change. Gujarati also notes that panel data enable more complicated behavioural models and minimizes the possibility of bias if broader aggregates were used (2003, 638). In many cases, panel data are also used to allow unobserved variables to be correlated with explanatory variables in the model (Wooldridge 2002).

Panels that have the same number of time periods across all observations are termed “balanced panels.” In cases where the number of time periods varies among individuals, this is termed an “unbalanced panel.” Baltagi (2005) notes that unbalanced panels must have missing data that are truly random, and not the result of selection by the researcher. Here the panel is unbalanced, with missing data the result of random
omissions. No special considerations need to be made for this type of unbalanced panel.

All my data were compiled into a panel dataset in Stata (version 10) with the country reference number serving as the panel identifier, and the year as the time variable.

Model Diagnostics and Econometric Techniques

Inferences from panel data are particularly sensitive to model specification and care must be taken to determine the correct estimation method. There are several tests available to determine the appropriateness of a variety of estimators, and I discuss each of these in turn.

Stationarity

The presence of a unit root in a time-series can pose serious problems with estimation. Stationarity indicates that there is no stochastic trend in the series, or that the variable is stable and non-explosive. Testing hypotheses with non-stationary variables can result in spurious regression, and suspect results. To guard against this, all variables included in the model should be checked for stationarity.

In a panel dataset, testing for unit roots can be difficult. Each individual country has its own time-series for each variable. The presence of a trend in one country may not pose a problem for the validity of the results, but multiple trends can cast doubt upon the results. Recent statistical advances in panel unit root testing have made these tests more reliable, but when the number of observations is relatively small, or the number of countries is larger than the number of time periods, the power of these tests may be limited.
In general, panel unit root tests average augmented Dickey-Fuller (ADF) tests across the panel. The IPS (Im, Pesaran and Shin 1997) test is perhaps the most common of the panel unit root tests, but it requires a balanced panel. As my dataset contains nations with different numbers of observations, the Fisher test must be used instead. The Fisher test is based on Maddala and Wu (1999), and can be calculated with an ADF or a Phillips-Perron (PP) test. These two tests resulted in similar test statistics, so I report only the ADF results for the sake of brevity. Each variable was tested to six lags, and the results are shown in Appendix F. The following variables conclusively exhibited trends, and are differenced in the analysis: private credit, inflation, debt, trade, and the Polity score. The Freedom House measure and population did not exhibit trends and are considered stationary. Growth in the gross domestic product (GDP) and the change in GDP per capita are differenced by definition and stationary.

For other variables, the question of differencing wasn’t so easily resolved. In some cases, the ADF tests indicated that differencing was needed, but when these values were included in the regression model, serious diagnostic flags were raised. In cases where the number of observations is small, or is for a restricted time period, panel unit root tests are known for their lack of power. Indeed, most of the questionable variables in this study fall into this category. The following variables indicate a unit root in the ADF test, but presented problems with estimation: tertiary education, poverty, inequality, corruption, participation, competition, Vanhanen’s overall democracy measure, effectiveness and regulation. However, the coefficients for the regression
models are quite consistent regardless of differencing, so this is largely a technical
detail without much substantive effect.

Pooling Observations

Determining the correct model to use presents something of a conundrum for the
researcher. When estimating models with panel data, the first thing that needs to be
determined is whether the observations can be pooled instead of separated across both
time and country. In other words, a pooled analysis would combine all observations as
one group across time, and assume that any effects do not vary by country. An F-test is
used to determine if there is a statistically significant difference between pooling and
non-pooling of observations, with the null hypothesis indicating that there is no
significant difference. For each of my hypotheses, the null was strongly rejected,
indicating that pooling the observations would result in inconsistent estimates (the
results of all diagnostic tests are reported in the Appendix E).

Beck and Katz note that F-tests for pooling too often reject pooling. They assert
that the gains from pooling offset the costs and that “the critical decision is whether
each observation is generated by the same process as the others” (Beck and Katz
2004, 5). Theoretically, one would expect that the process that generates economic
and political development in the United Kingdom in our sample is not the same process
as that in Uganda. Therefore, I do not pool the observations when testing any of the
hypotheses.
Panel Data Regression Estimators

Since pooling is not appropriate, we can consider the various regression estimators that are designed for use with panel data. There are two categories of estimators: fixed effects and random effects.

The fixed effects model takes into account that the intercepts may vary across countries, but assumes that the slope coefficients are the same. It can also take into account that the slope varies, but the intercepts are the same, or that all coefficients vary across individuals (Gujarati 2003). In the fixed effect model, a series of dummy variables is used to account for the differences in coefficients. One of the problems with fixed effects models, particularly with larger panels, is that the sheer volume of dummy variables removes many of the degrees of freedom from a model. Fixed effect regression models may also have difficulty in determining the effect of time-invariant variables, such as a variable indicating world region and may underestimate the effects of slowly changing variables (Beck and Katz 2004).

By contrast, random effects models treat the differences in intercept and slope coefficients differently and they are reflected in the error term rather than the inclusion of a dummy. The composite error term for the estimator, then, consists of the cross-section specific error and the combined time-series cross-section error (Gujarati 2003). Not surprisingly, the random effects model is also known as the error components model. It assumes that the individual errors are not correlated with each other, and that there is no autocorrelation among the cross-section and time series errors. The random effects model has an orthogonality assumption that all individual effects are
uncorrelated with the regressors. This can be tested by using a panel test for homoskedasticity to determine if the variances differ between groups.

A Hausman test is often used to choose between fixed and random effects estimators. In essence, the test determines whether there is a significant difference between the fixed effects model and the random effects model (Hausman 1978). A rejection of the null (a significant result in the test statistic) indicates that random effects are not appropriate and that fixed effects should be used. For my dataset and all hypotheses, the Hausman test indicates that the use of random effects is not appropriate. This result makes sense when combined with the test results for autocorrelation. Where autocorrelation is present, then ordinary least squares (OLS) estimates will be inefficient. Instead, generalized least squares are often used to estimate panel models. I use a Wooldridge test for autocorrelation in panel data (Wooldridge 2002), and find that autocorrelation is present in all variables.

Determining if there is heteroskedasticity in the panel data is a bit more difficult, but can be accomplished with a chi-square test devised by Baum (2001). The presence of panel heteroskedasticity means that the variance for one country will not be the same across all countries. Financial market variance, the amount of FDI, and the level of political and economic development are all likely to differ between countries, and the test confirms this for all variables. My test results indicate that the orthogonality condition does not hold for any of the tested variables, and that using an OLS or a random effects model would produce inconsistent results.

As the diagnostic tests indicate non-independently and identically distributed (i.i.d.) errors and heteroskedasticity, panel-corrected standard error (PCSE) estimators
are another option for hypothesis testing. Autocorrelation in the data will present
problems in PCSE estimators, but including a lagged dependent variable may correct
for this. Beck and Katz (1995, 2004) advocate the use of PCSEs in time-series cross-
section data, and note that they perform well in situations where the number of years is
close to the number of groups.

Dealing with Endogeneity

Econometric problems in this data may arise from three sources: endogeneity, omitted variable bias, and autocorrelation. I have already discussed the problems with autocorrelation, but there is reason to suspect that there are problems with endogeneity as well. Theoretically, we expect there to be some simultaneity between political and financial market development. There also could also be some unobserved factors (such as trust) that have effects on both political development and financial market development. Both problems must be accounted for in order to correctly estimate the model.

Endogeneity occurs when there some degree of simultaneous interaction between the dependent and independent variables. This dependence results in a violation of the conditional-mean assumption. In other words, the endogenous variables may be correlated with the error term (Nickell 1981), and this will result in biased and inconsistent estimates if OLS is used. Omitted variables are likely to result in inconsistent and biased results. If autocorrelation is present and a lagged dependent variable is used to correct for this, this may also be correlated with the error term and create another source of bias. These problems present the diligent analyst with a statistical quandary: how to estimate a model with such afflictions?
One possibility for hypothesis testing with endogenous panel data is the Hausman-Taylor estimator (Hausman and Taylor 1981). However, this model specifies that all errors are independently and identically distributed (i.i.d.) and the F-test demonstrated that this assumption is not valid. Therefore, any estimates with the Hausman-Taylor approach will be biased.

Another, more generalized approach involves use of instrumental variables. An instrument is a variable that is highly correlated with the endogenous variable and uncorrelated with the error term. The instrument also cannot act directly on the dependent variable (this would mean that it should be included in the initial regression). Not surprisingly, finding variables that meet such requirements can be a challenge. Instrumental variable regressions (IV) also do not directly account for the problems associated with the use of a lagged dependent variable, namely the potential for bias.

The problem of finding appropriate instruments can be solved by looking inside the equation itself for instruments rather than searching for an external solution. Once an appropriate internal instrument is found, then the model can be estimated using a generalized method of moments (GMM) estimator. Anderson and Hsiao (1982) developed a solution to the problems associated with endogenous variables by using further lags of the endogenous variables as instruments. Their initial method was improved upon by Arellano and Bond (1991), Arellano and Bover (1995) and Blundell and Bond (1998).

The Arellano-Bond estimator uses lagged values of the dependent variable as instruments, and is an internally derived IV approach. However, the lagged values of the dependent variable are often weak instruments (Arellano and Bover 1995, Blundell
and Bond 1998). Modifying the test to include lagged values as well as lagged differences may improve the power of the instruments (known as system generalized method of moments, or system GMM).

First differencing the model removes the individual effects (and the possibility of bias due to omitted variables). Using only differenced values, however, can have negative consequences. In cases where the variable resembles a random walk or a random walk with drift (common in financial data), then the internal instruments derived from a differenced value will poorly represent the data (Bond 2002). In these cases, it is more appropriate to use a system of equations to estimate the model that includes both the original model and the differenced model in system GMM. Blundell and Bond (1998) improved on earlier versions of system GMM estimators by using additional moment conditions to improve the performance of the estimator when the autoregressive parameters are large.

Model Specification

Initially, I estimate the models using a PCSE estimator as advocated by Beck and Katz (2004). With the PCSE model, I use the pairwise inclusion as the panel is unbalanced and this option includes all available observations, not just those with complete cases. This is essential since data are not available across all time periods and countries. I also use the concurrent value of the financial market development indicator, along with a forward of five, ten and fifteen years. Using multiple time periods may allow for the elucidation of the longer run effects of financial market development. The five, ten and fifteen year periods are selected to allow enough time for any effects to appear, but are short enough to capture the dynamics of the effect. Theoretically this
is appropriate because the effects of financial market development are not expected to appear instantaneously.

Unfortunately, however, PCSE models do not explicitly account for endogeneity in the model and a dynamic panel data estimator is needed to properly estimate these effects. In this study, I use two system GMM estimators to address these issues. These estimators work well with large-N, small-T studies such as this one, and uses internal instruments to create an IV-style regression. GMM estimators are also more efficient with heteroskedastic rather than homoskedastic error conditions, something that my diagnostic tests indicate.

I first ran the analysis with a modified Arellano-Bond estimator. Since these estimators can very easily create a very large instrument matrix, I limit the number of lags in the instrument matrix to four. Year and population are considered exogenous, and all other variables are considered at least partially endogenous. All models are estimated with robust errors in the Arellano-Bond models as the robust option produces standard errors that are asymptotically robust to panel heteroskedasticity. A one-period lagged dependent variable is included to account for autocorrelation.

Next, I tested the hypotheses with the Blundell-Bond system GMM approach. This version of the estimator adds additional moment conditions to improve the reliability of the results under less than ideal error conditions. For all models, population is treated as exogenous. Private credit, democracy level, FDI, trade, debt and GDP growth are likely to be endogenous due to measurement error and the potential for reverse causality, and are treated as such. This version of GMM allows for separation of endogenous and pre-determined variables, but treating the control variables as
predetermined rather than endogenous does not affect the estimation results. One-step estimation is used, and a maximum of two lags are specified for the instruments. Standard variance corrected errors are also used. Given the improved performance associated with the Blundell-Bond estimator, these results are reported and discussed in Chapter 5.

Sensitivity Analysis

Since IV regressions are sensitive to specification, testing a variety of specification ensures that the results are robust and reliable. The inclusion or omission of variables, and different lag specification largely does not affect the main coefficients of interest in either the PCSE or the GMM estimated models. When all three estimators provide similar results, there is some confidence that financial market development is truly having an effect on political and economic development, and that the results are not spurious.

Summary and Discussion

Operationalization of development variables can be a tricky task, and finding data that adequately represent the conceptual definition of a term can be daunting. I use a variety of data to represent the various conceptual definitions, and to minimize any bias that results from measurement error and missing data. Several control variables are also included.

Specification of the model is particularly important when using panel data, as different models can produce different results, even with the same dataset. Diagnostic tests reveal the presence of heteroskedasticity, autocorrelation, endogeneity and the inappropriateness of using pooled data.
Estimation using OLS analysis does not account for omitted variable bias. When autocorrelation and endogeneity are present, OLS may also produce inconsistent, biased and inefficient results. Using a PCSE model is advocated by some, and all hypotheses are testing with this estimator. Given the likelihood of endogeneity, however, an instrumental variable approach may be best suited for the data. Since devising appropriate external instruments is difficult, I use the internal instruments approach first developed by Anderson and Hsaio, and popularized by Arellano and Bond. I then test the hypotheses using Blundell and Bond’s newer system GMM estimator. The results of the tests are presented in Chapter 5.
CHAPTER 5
RESULTS OF ANALYSIS

Introduction

In this chapter, I evaluate my theory based on the results of the empirical tests discussed in Chapter 4. I present a general overview of my findings first, and then discuss each hypothesis in detail. First the hypotheses examining economic development are presented, followed by the social variables, and conclude with the political development tests. I review the major theory associated with each group of hypothesis, and then discuss the results for the individual hypotheses. I also note some of the problems with the models, and discuss how much confidence we can place in these results. The conclusion of this chapter discusses the overall implication of my results. More specific regional results are discussed in Chapter 6.

General Summary of Results

Table 5.1 presents the main results on how financial market development affects economic and political development using the endogenous dynamic panel data estimators developed by Blundell and Bond. The columns display the coefficients on financial market development for each of the four time periods tested (the contemporaneous regression, and estimates of the effects with the dependent variable with 5, 10 and 15 year leads). The dependent variable for the regression is listed by row. Thus, each value represents a separate regression. The complete results of the Blundell-Bond regressions are available in Appendix G.
Table 5.1 Coefficients for Private Credit on Dependent Variables

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Concurrent</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in GDP per capita</td>
<td>-234.90</td>
<td>86.98</td>
<td>58.44</td>
<td>322.00</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>-5.742*</td>
<td>0.261</td>
<td>2.439</td>
<td>2.079</td>
</tr>
<tr>
<td>Tertiary Education</td>
<td>-1.448</td>
<td>0.0499</td>
<td>-10.52**</td>
<td>2.82</td>
</tr>
<tr>
<td>Poverty Levels</td>
<td>-1.667</td>
<td>3.942**</td>
<td>-12.61***</td>
<td>-20.55***</td>
</tr>
<tr>
<td>Inequality</td>
<td>2.470*</td>
<td>2.784*</td>
<td>-4.932***</td>
<td>-2.653*</td>
</tr>
<tr>
<td>Participation</td>
<td>4.353</td>
<td>0.664</td>
<td>0.656</td>
<td>0.849</td>
</tr>
<tr>
<td>Corruption</td>
<td>0.0253</td>
<td>-0.272</td>
<td>0.396***</td>
<td>0.266**</td>
</tr>
<tr>
<td>Competition - Vanhanen</td>
<td>-37.64***</td>
<td>8.956</td>
<td>-4.866</td>
<td>8.622</td>
</tr>
<tr>
<td>Competition - Polity</td>
<td>-2.095***</td>
<td>0.142</td>
<td>0.939</td>
<td>2.148***</td>
</tr>
<tr>
<td>Development - Freedom House</td>
<td>-4.427</td>
<td>-1.454</td>
<td>1.834</td>
<td>11.32**</td>
</tr>
<tr>
<td>Development - Polity</td>
<td>-25.14***</td>
<td>0.721</td>
<td>5.995</td>
<td>7.147</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>-0.0456</td>
<td>0.906***</td>
<td>0.0489</td>
<td>0.812***</td>
</tr>
<tr>
<td>Regulation</td>
<td>0.374**</td>
<td>0.636**</td>
<td>0.412**</td>
<td>0.388*</td>
</tr>
</tbody>
</table>

Economic Variables

Financial market development is hypothesized to improve economic growth in a nation by allocating resources more efficiently than they would be in their absence. They do this by spreading risk, allowing investment in larger, higher return projects, eliminating information asymmetries, and providing capital to the most competitive, highest returning projects regardless of individual or firm connections. In high income nations, financial market development is expected to increase the productivity of capital, while in lower income nations financial market development should boost capital accumulation and mobilization of savings. Financial market development is also expected to change the distribution of income in a nation by providing access to capital for lower income groups to invest in education and engage in entrepreneurial activities. Access to credit should also allow income smoothing and prevent the deeply discounted sale of assets during periods of economic hardship. These effects are hypothesized to disproportionately benefit the lower income groups in a nation, and thus to alleviate poverty and reduce income inequality.
I test three specific individual hypotheses related to economic development: economic growth, the level of poverty, and the level of income inequality within a nation. First, I note some of the model specification with the economic hypotheses, and then discuss the results of each below.

Growth in gross domestic product (GDP) is not differenced, as this variable already represents the change in GDP from one year to another. Augmented Dickey-Fuller (ADF) tests confirm the stationarity of this variable. Autocorrelation test results on GDP growth are not conclusive. Its exclusion, however, has little substantive effect on the results. Like GDP growth, the autocorrelation tests for change in GDP per capita are not definitive, but the inclusion of a lagged term does not significantly alter the estimation outcome. The ADF test results for poverty and inequality indicate that a unit root is present in the series and differencing is necessary. In these cases, differencing the variable results in abnormally high chi-squared statistic values and does not result in a significant difference in the estimated coefficients. In these cases, I use the original, non-transformed value for all estimations. Coefficients on this lagged variable (differenced or not) remain close to one, indicating some unknown heteroskedastic process is present in the data. Poverty and inequality data are not available for North America, Western Europe and much of East Asia, therefore the restricted estimations are not available for these regions.

Economic Growth

I hypothesized that financial market development would lead to higher economic growth, as measured by GDP. Using both overall change in GDP and per capita GDP, I test the following model:
Contrary to expectations, I do not find that financial market development has a positive effect on either the overall growth rate, or on the per capita growth rate. Initially, financial market development has a significant negative effect on overall GDP growth, but the results are not significant for any subsequent time lags. Financial market development never exerts a significant effect on per capita GDP growth. Foreign direct investment has a small but positive effect on GDP growth, while higher levels of inflation and debt have a negative impact on overall economic growth. The effects of the control variables are slightly different in the GDP per capita model; improvements in the Polity score and increasing trade positively increase GDP per capita, but higher levels of debt and foreign direct investment (FDI) decrease it, albeit very slightly.

Given the volume of literature that supports this hypothesis, my results are surprising. The control variables used in this study are largely similar to others with the exception that I use the Polity democracy score in addition to other economic controls. However, excluding this variable affects neither the direction nor the significance of my results. The panel-corrected standard error (PCSE) regression results, as well as the Arellano-Bond regressions all produce similar results to those presented above. While my hypothesis is not supported, the results imply that further research is needed to explain the discrepancies in the literature.

It is possible that national levels of income may be masking a relationship (a more extensive discussion of the results on the various income categories is provided in Chapter 6). Wealthier nations’ economies tend to grow more slowly than those of...
middle-income nations. Moreover, it may take different amounts of time for economic growth effects to appear in economies with different levels of development. There may be a variety of factors that obscure the expected relationship as modelled here. Indeed, when the models are limited by national income strata, the effects are stronger than in the general model. The middle income nations show a significant and positive effect for overall and per capita GDP after fifteen years, while high income nations experience a significant decline simultaneously. Low income nations also exhibit a statistically significant decline at first, but shift to a positive coefficient over time.

This suggests that the curvilinear relationship between financial market development and growth suggested by Greenwood and Jovanovic (1990) is correct, and substantiates the idea that financial market development affects economic development in different ways depending on the initial conditions. Middle income nations show improvement after fifteen years suggesting that it takes time before the increase in credit reaches enough of the population to have an effect. Further, if capital accumulation is the effect in lower income nations, then it would take time for savings and other capital to reach a critical mass and general returns. This could account for the observed time lag between private credit levels and economic improvement. The lower the level of initial development, the longer it takes for market mechanisms to develop good risk assessment and information institutions, and may explain why lower income nations have a longer lag.

In the case of high income nations where access to credit is much less restricted, it may suggest that there is an over-reliance on credit at the expense of savings and investment. With a credit glut, less productive projects are approved, and capital may
not be used in the most effective way. Given the very rapid pace of investment and reporting in most high income nations, this may explain why an increase in credit has a negative effect on GDP, and why the effects are observed so rapidly.

Reduction in Poverty

Hypothesis three theorizes that an increase in financial market development will decrease the level of poverty within a nation:

\[ Y(Poverty)_{it} = \alpha + \beta_1(PrivateCredit_{it}) + \beta_2(LaggedPoverty_{it}) + \beta_3(Democracy_{it}) + \beta_4(FDI_{it}) + \beta_5(Inflation_{it}) + \beta_6(Debt_{it}) + \beta_7(Trade_{it}) + \beta_8(GDPGrowth_{it}) + \beta_9(Population_{it}) + \epsilon_{it} \]

Financial market development may reduce poverty by boosting overall economic growth, and changing the distribution of income within society. Credit constraints and lack of political connections are especially binding on lower income groups, and low income savings are often inadequate to fund high-return investments such as education and business entrepreneurship. A developed financial market provides better access to credit and market information meaning that those without collateral or connections can be judged on the quality of their projects. Also, access to credit may allow for income smoothing during hardship or inflationary environments. Finally, better financial markets may provide a check on monopolistic companies, and provide better services at more competitive rates.

Greenwood and Jovanovic (1990) suggested that there is a quadratic relationship to financial market development, with it exacerbating poverty and inequality at high and low income levels, and decreasing it in middle income nations. This is because financial market development may not reach the lowest levels of society, particularly in countries where the level of economic development is so low that only the elite have access to these services.
I find that financial market development does have a substantive and significant effect on poverty rates, and that these results are robust across a variety of estimators (row four in Table 5.1 shows these results). However, the positive developmental impact of financial market development is not immediately apparent. An increase in financial market development does not have initial effect, but an increase in credit actually increases the poverty level after 5 years. However, after 10 years, there is a substantial and significant drop in poverty, and as time passes, the effect increases in magnitude. This long delay likely occurs because it takes time for society to develop trust in the financial market system, particularly in countries that have had a history of banking crises. It may also take time for the lower income segments of society to become familiar with credit, and how it can be used to their benefit.

Democracy levels, GDP growth, inflation and debt have a significant effect on poverty rates, but the magnitude of these effects is small. Predictably, higher levels of democracy and an increase in GDP growth tend to alleviate poverty levels. Reduction of poverty likely occurs because of the redistributive effects on income that may occur in democracies. GDP growth increases the size of the economy overall. Greater debt levels slightly exacerbate poverty, likely because debt would tend to constrain a government’s ability to provide subsidies or other forms of social insurance for the population. The effects of inflation are significant, but almost indistinguishable from zero.

The effects of poverty reduction are strongest in low and lower middle income nations, with the effects most pronounced in low income countries (further discussion and results on these income categories are presented in Chapter 6). After an initial
increase, poverty significantly decreases after ten years, and continues its decline after fifteen. The lowest income countries, however, have a stronger magnitude of effect than the lower middle income nations. These results suggest that financial market development and the provision of credit has the strongest impact where there is little initial capital, and where some poverty can be alleviated by allowing small businesses enough credit to achieve economies of scale and to finance improvements in education or infrastructure that have high returns. Low income nations also have higher poverty levels to begin with, so slight improvements may affect a large percentage of the population.17

In contrast to lower income nations, upper middle income nations observe a decrease in poverty after ten years, but then a rise in poverty after fifteen years. I surmise that in these nations, the increase in private credit occurs largely in the consumer credit sector. These new consumer-oriented financial products (such as credit cards) are introduced to a population with a relatively low level of financial education. The targeted population may not fully understand the implications of credit, take out loans that they are unable to pay back, and suffer an economic decline as a result. The demand for credit increases as awareness of these products increases (through advertising by credit issuers), and the financial sector, understanding the risks associated with these loans, charges a premium to these customers thus making the debt even more untenable. As the recent mortgage debacle effectively demonstrates,

17 The mean poverty level for low income nations is 70%. Middle income nations have a mean level of 31%, and 13% of the population in upper middle income nations live in poverty.
even the most advanced financial markets are prone to this. I suspect that if data were available for high income nations, we would observe a similar pattern.

Another explanation for these results is based on the idea that the causes of poverty are different in low and high income nations. In very low income societies, poverty may be the result of lack of investment in infrastructure, the lack of capital to start a business, or the inability to finance an education. In short, the root causes of poverty are more easily solved by adding credit. In higher income nations, the causes of poverty may be more intractable. The easiest cases may have already been resolved, and poverty is now due to more structural factors in the country, such as geography, overall education levels and industrial technology and concentration.

Financial market development clearly plays a role in the level of poverty, and notably improves conditions in the low and lower middle income nations. It also alleviates poverty to some extent in the upper middle income nations, but can exert a negative influence over time. These results are robust for a variety of model specifications, and lend strong support for my hypothesis.

Reduction in Income Inequality

Hypothesis four states that an increase in financial market development will decrease the level of income inequality within a nation:

\[ Y(\text{Inequality})_{i,t} = \alpha + \beta_1(\text{Private Credit}_{i,t}) + \beta_2(\text{Lagged Inequality}_{i,t}) + \beta_3(\text{Democracy}_{i,t}) + \beta_4(\text{FDI}_{i,t}) + \beta_5(\text{Inflation}_{i,t}) + \beta_6(\text{Debt}_{i,t}) + \beta_7(\text{Trade}_{i,t}) + \beta_8(\text{GDP Growth}_{i,t}) + \beta_9(\text{Population}_{i,t}) + \varepsilon_{i,t} \]

The theory behind decreasing inequality is related to the arguments for poverty reduction. The ability to smooth income during short-term decline and greater
investment levels translates into a greater percentage of the population entering the economic mainstream and lower income inequality.

The results of the hypothesis tests show that financial market development has a substantive and significant effect on income inequality across all time periods, but that a decrease in inequality takes time (see row five in Table 5.1). An increase in private credit initially exacerbates income inequality, an effect that persists for 5 years. After 10 years, however, the amount of private credit decreases income inequality and this effect continues throughout the remaining time periods. As with the poverty results, the control variables had a very slight effect on the level of inequality. Foreign direct investment and democracy levels associate positively and significantly with lower income inequality, but the size of the coefficient is very close to zero.

Unlike the poverty results, the beneficial effects of financial market development are limited to the lowest income nations. In these cases, an increase in credit significantly lowers inequality in all four time periods, with the largest effect seen after 10 years. The lower middle income nations see an increase in inequality after 15 years, and the upper middle income nations do not observe any significant effects.

One might argue that low income countries have a larger income gap to start with, and therefore that it is easier to show improvement. However, a quick look at the descriptive statistics for the income levels reveals that there is not a considerable difference in the Gini index between categories (low income countries have a mean of 40.5, while upper middle income categories have a mean of 41.8). This is an intriguing result, and one that deserves additional scrutiny in future research.
We can have some confidence in the findings as they are similar across the
different estimation methods, and are not sensitive to model specification. These results
support my hypothesis, but with the caveat that time is required before financial market
development becomes beneficial. Poverty reduction built upon access to credit takes
time. Existing businesses grow and new ones form, providing employment that
eventually stimulates demand and encourages further growth. This process unfolds
slowly compared to direct transfer payments from rich to poor in the form of consumer
subsidies and welfare, but will likely have a more persistent long-term effect on
economic growth.

Overall Economic Results

The results of my hypothesis testing yields strong evidence to support the theory
that financial market development leads to improvements in poverty levels and reduces
inequality within a nation. The results for improvements in economic growth, however,
were less conclusive. While financial market development has a positive impact on
growth in middle income nations, it can have negative consequences for those nations
on either end of the income spectrum. Financial market development alleviates poverty
and inequality in low and lower middle income nations, but like its effects on growth,
may have a negative influence as national income levels rise. This suggests that while
policies promoting financial market development are an important tool of policymakers,
there are substantial structural differences between nations that must be considered.

Social Variables

Other research points to a positive relationship between financial market
development and human capital (Benhabib and Spiegel 2000). It is thought that greater
financial market development allows for greater investment in human capital when there are fewer constraints on borrowing for education (Jacoby 1994, DeGregorio 1996). In other words, having access to finance facilitates investment in human capital. As data on civil society are not readily available in cross-national format, the hypothesis testing on social variables is limited to educational enrollment.

Tertiary Education

Having access to private credit allows individuals to borrow to finance their education, and consequently increases the level of human capital within a nation. In nations where financial depth is greater, students may also be able complete more years of schooling and delay entry into the workforce. Thus, I hypothesized that an increase in the level of financial market development will result in higher levels of university and other post-secondary (tertiary) enrollment.

\[
Y(Enrollment)_{ij} = \alpha + \beta_1(PrivateCredit_{ij}) + \beta_2(LaggedEnrollment_{ij}) + \beta_3(Democracy_{ij}) + \beta_4(FDI_{ij}) + \beta_5(Inflation_{ij}) + \beta_6(Debt_{ij}) + \beta_7(Trade_{ij}) + \beta_8(Population_{ij}) + \beta_9(GDPGrowth_{ij}) + \varepsilon_{ij}
\]

ADF tests on tertiary enrollment levels indicated that a unit root may be present in the data, but the number of observations is small (100-124) and unit root tests have low power under these conditions. Both the differenced and non-differenced variables show autocorrelation. In both cases, the coefficient on the lagged variable is close to one, and the constant is significant. Normally, this would indicate a unit root. However, even after differencing these problems are still noted. This could be indicative of an unknown heteroskedastic disturbance, and casts doubt upon the results. Both differenced and non-differenced models result in almost identical results. Given the
paucity of observations, income and regional coefficients are not calculated for this hypothesis.

Tests of this hypothesis show that financial market development has a significant and negative impact on tertiary enrolment rates after ten years. This seems to be counter-intuitive on its face, as increased credit should make education more accessible to the population. Upon greater thought, however, this finding is in keeping with the counter-cyclical relationship between tertiary education enrolment and economic conditions. As economic opportunities increase, the opportunity cost of foregoing employment and enrolling in a university is higher. Tighter labor markets also mean that a university degree is not needed for employment. Thus, as the economy improves, university enrollment declines. Given that the effects of financial market development take some time to affect economic growth (see hypothesis 1), the effects of tertiary enrollment are likewise subject to a time lag. Of the control variables, only Polity shows a significant effect, and very slightly decreases tertiary enrollment.

Measuring human capital is a tricky task, made much more difficult by the lack of reliable cross-national data. Ideally, a human capital measure would include a broad measure of the education level within society. The data available for the largest number of countries, tertiary enrollment, is used in this study. Unfortunately, this measure does not adequately capture the true measure of human capital within a society. Tertiary education rates are relatively low worldwide, and the figures may be too small to illustrate the effects. In addition, the data are still sparse and are collected primarily for higher income nations, which may bias my results somewhat.
These results are consistent with other estimators that take into account endogeneity (Arellano-Bond), but the general effects are not significant in the PCSE regressions. The relative paucity of data precludes analysis by either income level or region. While financial market development does have an effect on tertiary enrollment rates, the effect is opposite the hypothesized direction. The theory underlying this hypothesis needs further clarification, and a better measure of human capital should be used in future empirical testing.

Political Variables

In Chapter 3, I posit that financial markets affect democracy by improving the distribution of economic and intellectual resources, strengthening the middle class, improving participation, and strengthening civil society. By extending economic opportunities and other resources previously reserved for elites to the whole population, the balance of power shifts toward the middle classes. With increased resources, individuals have both the incentive and the resources to engage in political participation and compete with other political groups. This competition will make governments more transparent and accountable to the population, increasing government effectiveness and decreasing opportunities for corruption. This ultimately leads to an increase in democracy within a nation. My hypotheses on political participation, political competition, democracy, corruption and institutional improvement are discussed below.

Participation

Hypothesis 5 states that an increase in financial market development will result in an increase in political participation:

\[ Y(Participation)_{it} = \alpha + \beta_1(PrivateCredit_{it}) + \beta_2(LaggedParticipation_{it}) + \beta_3(FDI_{it}) + \beta_4(Inflation_{it}) + \beta_5(Debt_{it}) + \beta_6(Trade_{it}) + \beta_7(GDPGrowth_{it}) + \beta_8(Population_{it}) + \epsilon_{it} \]
Financial market development affects participation by increasing overall wealth, thereby increasing the incentive for individuals to care about government activities. It may also increase participation by providing the resources to engage in political activity.

ADF tests indicate that there may be a non-stationary series in the panel dataset, and autocorrelation tests reveal that autocorrelation is present in this model. Under the PCSE estimation, use of the differenced variable resulted in a very low R-square statistic of less that 0.01. In the dynamic panel model, the chi-squared values were also exceptionally low. Differencing the variable does make the value of the lagged coefficient much lower, but autocorrelation tests indicate that with the differenced variable, autocorrelation is not present. Differencing the variable does not significantly change the estimation results, nor does the inclusion or exclusion of a lagged term. As a result, I use the original value of participation in all estimations.

While there is no direct contradictory evidence against this hypothesis, there is not much evidence supporting it either. The PCSE models show a significant and positive effect at the outset. The subsequent time periods have positive coefficients, but none is significant. In the dynamic panel regressions, we see that the coefficients are similar in size and are positive, but financial market development fails to reach a statistically significant level of association for any time lag.

Very few of the control variables proved significant. Foreign direct investment induces a very slight increase in participation (coefficients range from 0.015 to 0.018) while higher levels of debt associate slightly with decreases participation (approximately -0.008 to -0.011 across the various models). Nor was there any significant effect when the model was restricted by income level. Financial market development generally has
a positive coefficient on political participation, but is not significant for any income level at any time period.

The hypothesis test results for participation are not conclusive, but some of the effect may be masked by the effects of age distribution on the measure of participation. Vanhanen's measure of participation is calculated by the number of people casting votes as a percentage of the total population. Most low income nations, however, have very large youth populations. This could create the appearance of financial market development having no effect on participation when it is, rather, that a smaller percentage of the population being eligible to vote. This phenomenon could well be masking turnout effects that would likely appear only after a longer time lag than I consider here. Future research using a different metric (for example, turnout among the voting age population) may eventually prove to be a better measure for testing this hypothesis.

Voting is only one form of participation in politics, but it is almost the only kind that can be captured in readily comparable cross-national statistics. Citizens may be engaged in campaigns and elections, party activity, contacting officials, civil society activities, and protest as well, but these are not readily accessible except through survey research. It may well be that there is considerable and meaningful participation going on in addition to voting for public officials that I cannot test for. Participation modes, such as protests and civil society may be stimulated indirectly by the developmental effects of financial market development, but we cannot test for these effects. Conversely, increasing levels of credit may increase the level of satisfaction with the government so that citizens do not feel the need to increase their participation.
Given that one of these explanations supports my hypothesis, another contradicts it, and that there are measurement problems associated with participation, more research is needed to conclusively determine this relationship.

Competition

As with political participation, financial market development may also increase the level of political competition as individuals and groups increase their stakeholding in society. Further, an increase in intellectual and financial resources will allow groups to mount stronger competition to the parties in power. Thus, hypothesis 8 states that political competition will increase as the level of financial market development increases:

\[
Y(\text{Competition})_{i,t} = \alpha + \beta_1 (\text{Private Credit}_{i,t}) + \beta_2 (\text{Lagged Competition}_{i,t}) + \beta_3 (\text{FDI}_{i,t}) + \beta_4 (\text{Inflation}_{i,t}) + \beta_5 (\text{Debt}_{i,t}) + \beta_6 (\text{Trade}_{i,t}) + \beta_7 (\text{GDP Growth}_{i,t}) + \beta_8 (\text{Population}_{i,t}) + \epsilon_{i,t}
\]

In the Vanhanen competition measure, the ADF tests suggest that a unit root may be present in at least one of the series. However, the R-square and chi-squared values are so low in the differenced estimations that I am sceptical about using this specification. Using the original measure in the model results in more reasonable R-squared and chi-squared values. Consequently, the original value of Vanhanen’s competition measure is used for estimation. A lagged term on the dependent variable is included to account for the autocorrelation present in the model.

Where the Polity measure is concerned, a similar problem with the low r-squared values is encountered. As with the Vanhanen measure, the ADF tests indicates a unit root, but the evidence against using the differenced variable is more persuasive. As autocorrelation is present with this measure, a lagged value is included.
Recall that Vanhanen’s competition metric reports the percentage of seats won by the largest party. As such, a decrease in the value indicates greater competition in the country. In further discussion I refer to this as a decrease in party dominance so that the reader is not confused by the direction of the coefficients.

Financial market development results in significantly decreased party dominance at the outset, and the magnitude of the effect is quite large in the general model (coefficient of -37.64). However, no other time lags are significant, and the direction of the coefficient changes from negative to positive and back again over time. As with participation, however, the true effects of financial market development may be concealed by the way competition is measured. A highly fractured government with a large number of parties will show less party dominance than a stable, two-party government as in the United Kingdom or the United States. A large number of parties may indicate that entrance costs to the political system are low, but the number of parties can be affected by both the electoral system used and election period itself. The party systems of Eastern Europe became strongly fragmented after their election systems were liberalized, but were highly unstable, and parties often existed for only one election period. Coalition formation is difficult under these conditions, and government efficiency is reduced when there is no strong consensus for action. Eventually, many of the disparate parties joined their efforts and formed larger, but fewer, parties. An increase in financial market development may indeed give a boost to small and special interest political parties initially, but these coalesce into broader parties over time, explaining why the variable is significant at the outset, but shows
increasing (if insignificant) party dominance over time. The PCSE models show a significant and negative effect, but there is a positive and significant effect at fifteen years in addition to the negative and significant effect initially.

Debt is the only control variable that exerts a significant effect on political competition, and an increase in debt is associated with a decrease in party dominance. This may be because significant government debt increases the cost of conducting business within a nation (in the form of higher interest rates) and can slow overall economic growth.

Low income nations do not show significant effects of financial market development at any time, but the coefficients are in the same direction as the general model; decreased party dominance at the outset, but an increase over time. For lower middle income nations, we again see a significant decrease in party dominance initially, with the effect turning positive and insignificant after five years. After ten years, however, party dominance begins to decrease again, albeit insignificantly. Upper middle income nations show decreasing party dominance at the outset and after five years, but the negative effect is only significant after ten years. The coefficient becomes positive and insignificant after fifteen years. High income nations show the same pattern as the upper middle income nations, with a significant and negative effect at ten years.

In low and lower middle income nations, better access to credit may allow citizens to create political competition. As time passes, however, people may either become satisfied with the level of political competition and may see more value in pursuing individual business activities, or have become disenfranchised and feel that
creating political competition within the framework of the existing system is futile. Both of these explanations may be true for the different income levels. The results lend some robust support for my hypothesis, but further research is needed to more clearly delineate the motivation for this relationship.

Polity

The Polity competition score is a measure of the institutional regulation regarding political contests. Here, an increasing value indicates the potential for greater political competition within a nation.

For this measure, financial market development has a significant effect across the three time lags, but the direction of the effect changes over time. Initially, financial market development has a significant and negative effect on political competition (coefficient of -2.095). The direction of the effect changes to positive after five years, but is not significant. After ten years, however, the effect is both positive and significant, and this effect continues with an increase in magnitude. After fifteen years, the effect is strongly significant, with a positive coefficient of 2.148. These effects are also seen in the PCSE and Arellano-Bond models, so the results are robust.

As with the Vanhanen competition measure, an increase in debt is again associated with an increase in political competition. The Polity measure is also affected by GDP growth and FDI. Increasing GDP growth increases political competition, while increased levels of FDI very slightly decrease it.

Breaking down the results by income strata reveals differentiated patterns for the income groups. While low income nations initially show an increase in political competition, the effects are insignificant, as they are for all time lags in the study. Lower
middle income and upper middle income nations mimic the general results, and see a
decrease in competitiveness at the outset that changes to a significant increase in
competitiveness after fifteen years. High income nations show the same direction of
results, but they are not significant for any time period.

These results may be explained by the idea that citizens are satisfied with an
initial increase in credit, and may attribute this largesse to the current government.
Over time, there may be a greater demand for politics to reflect an increasing variety of
interests as the population starts see how their lives are affect by the government. In
addition, the Polity measures looks at “hard” competition measures which are largely
captured by rules in electoral laws and national constitutions. Changing these elements
of political competition takes time, and may account for the time lag between the
increase in credit and the increase in political competition.

Unfortunately, while this idea can explain why there is an increase over time and
why there might not be a significant change at the outset, it does not explain why there
is a significant and negative effect initially. Why would there be a significant change in
institutions that limits political competition? One possible explanation lies in the idea
that an increase in financial market development is anticipated by governments, and
they try to limit the competition to ensure that they receive the credit (and the spoils) of
financial market development. Limited political competition may also signal to the
financial markets that the government is stable and that the investment environment is
less risky than a more open, but potentially more tumultuous, political system. Over
time, these fears are allayed, and the political system may then become more open to
competition.
Increased financial market development results in increased political competition (as measured by Polity) after ten years, even though the effect is initially negative. These results also demonstrate that the effects are felt most strongly in middle income nations. Testing the Polity measure of political competition adds further evidence to support this hypothesis.

The two different measures both provide support for my hypothesis, but also demonstrate that financial market development may affect political competition in different ways. Initially, we observed decreased party dominance in conjunction with a negative change in electoral rules. The rule changes may be an attempt by the current government to stymie the rising power of various groups. Thus, the dominant parties may lose some seats, but retain power. Over time the various interest groups coalesce into larger blocks (explaining the insignificant effect for the Vanhanen measure), while simultaneously demanding greater access to the political system. This results in the positive and significant changes to the Polity measure over time.

Reduction of Corruption

Hypothesis seven tests the effect of financial market development on corruption levels within a nation. I theorized that underdeveloped financial market systems created incentives for corruption. With lower levels of information, uncertainty drives up the cost of transaction. When the costs become too high, individuals may seek other alternatives outside the legal channels. They may seek to exploit their political connections through bribery as a means of cutting costs and red-tape, or look to the shadow economy for assistance in securing loans (e.g. your local loan shark). In this case, capital is then likely allocated to those with the best connections, not to those with
the most efficient projects. This misallocation results in ever greater costs, and thus provides an additional incentive for corrupt behavior. Such a closed system also stifles criticism of the government, if those seeking capital are reliant on these corrupt government officials to approve and/or fund investment. Thus, a system of patronage and corruption becomes endemic and a vicious cycle results.

Good financial markets may affect corruption by lowering transaction costs, and reducing uncertainty about the risk of a particular project, thereby eliminating some of the incentive for corrupt behavior. Those seeking investment capital will not be tempted to bribe or deal with corrupt officials for access to capital, for example, if efficient financial markets exist. Well developed financial markets also embody a degree of accountability and transparency in which corrupt activities are easier to detect and punish. By removing the incentive for cheating by both supplier and consumer, financial markets may reduce the level of corruption within a nation.

\[
Y(Corruption)_{i,t} = \alpha + \beta_1(PrivateCredit_{i,t}) + \beta_2(LaggedCorruption_{i,t}) + \beta_3(Democracy_{i,t}) + \beta_4(FDI_{i,t}) + \beta_5(Inflation_{i,t}) + \beta_6(Debt_{i,t}) + \beta_7(Trade_{i,t}) + \beta_8(GDPGrowth_{i,t}) + \beta_9(Population_{i,t}) + \varepsilon_{i,t}
\]

ADF tests on corruption do not give any strong evidence of trends in the data. However, as the coefficient on the lagged value of corruption (autocorrelation is present in the data) is close to one, I tested the models using a differenced value in addition to the actual value. As expected, use of the differenced value resulted in an extremely high chi-square value. The coefficients on the variables were not much altered in either case. Consequently, all the results reported here were obtaining using the non-differenced value of the variable.
The number of observations on corruption is limited (roughly 230 observations for 69 countries), as the data begin in 1996. In this measure, a negative coefficient indicates worsening corruption, or a lower “integrity” score while a positive coefficient indicates an improving perception of corruption within the country. Using a Blundell-Bond estimator to account for the endogenous nature of corruption, I find that financial market development (measured by private credit) is strongly associated with an increase in the corruption score after 10 and 15 years (a positive coefficient indicates that the corruption score is improving, and that overall corruption is less present in a nation).

Higher levels of democracy, GDP growth and FDI are also significantly associated with lower corruption ratings, but with a much smaller magnitude (coefficients range from 0.001 to 0.006). Debt, inflation, trade and population growth have a negative impact on corruption levels with similar magnitude.

These results show that financial market development does result in lower levels of corruption within a nation, even when controlling for the variables often thought to contribute to corruption. Financial market development may be increasing the amount of public information, something that Adsera et al. (2003) find important in explaining corruption levels. It may also reduce the incentive for corruption by making corrupt financing more expensive relative to market options. At the same time, using private credit as the main measure of financial market development may not provide a complete assessment. An increase in the amount of private credit suggests that government does not have a monopoly on financial institutions, but does not give a clear picture of the true level of competition in a nation. Further refining the
measurement of financial market development would better elucidate the action mechanisms between corruption and financial market institutions. Corruption also tends to have strong and lengthy histories within a nation, and the data do not cover an extensive time period.

Restricting the models by income level and region results in similar outcomes, but with changes in timing. Low income nations do not show any significant improvement in corruption. The lower middle income nations do experience an improvement after 15 years, while upper middle income nations experience the effect immediately. The effects on high income nations are most interesting; financial market development results in more corruption after 5 years, but the direction of effect changes after 10 years. After 15 years, financial market development results in significantly less corruption.

Recent literature has suggested that periods of economic boom fuel corrupt practices in the short-term, as the potential to reap rents is high, and the cost of detection relatively low (Olofsgard and Zahran 2008). This may be the case in Eastern Europe and Russia, where economic transformation and a boom in European investment and commodity prices may create just such an environment.

When this hypothesis is testing using other regression techniques, the direction and size of the private credit coefficients are similar to the results presented above. However, financial market development is significant for fewer time lags when other estimation methods are used. Hence, these results may be sensitive to model specification, and may not be as robust as the poverty and inequality results.
Nonetheless, these results provide empirical support for this hypothesis, and indicate that further study of this theory is warranted.

**Democracy**

Hypothesis nine asserts that an increase in financial market development will increase the level of democracy in a nation:

\[
Y(Democracy)_{i,t} = \alpha + \beta_1(PrivateCredit_{i,t}) + \beta_2(LaggedDemocracy_{i,t}) + \beta_3(FDI_{i,t}) + \beta_4(\text{Inflation}_{i,t}) + \beta_5(\text{Debt}_{i,t}) + \beta_6(\text{Trade}_{i,t}) + \beta_7(\text{GDPGrowth}_{i,t}) + \beta_8(\text{Population}_{i,t}) + \varepsilon_{i,t}
\]

Financial market development may create an environment that is conducive for democracy by increasing income equality and lowering poverty rates. Financial market development may also strengthen the middle class by providing opportunities for education and business development that may have previously been exclusively reserved for elites. This dispersal of economic and human resources may result in a change in the distribution of power in society, and prevent any one group from monopolizing this power. Finally, financial market development may positively affect democracy by enhancing economic rights in a society, and creating opportunities for investment based on virtue of ideas rather than political connections.

Hypothesis testing for democracy was conducted using three measures: Vanhanen's index of democracy, a standardized measure of the Polity II indicator, and the standardized Freedom House score. For all variables, a positive coefficient indicates an improvement in democracy levels.

The ADF tests on Vanhanen’s democracy measurement indicate that a unit root is present. Like some of the other variables, however, the same problems with chi-squared values assert themselves here. For reasons of consistency, and because the
estimation values are relatively unchanged between the transformed variables, I use the original, not the differenced, value of Vanhanen’s democracy measure. The opposite problem is encountered with the Polity data, and differencing the variable results in complete explanation of the model (according to the R-squared value of 1.000), and chi-squared values of over 4 million! Using the original Polity value results in more plausible goodness of fit estimates, and the coefficients on the variables themselves are largely the same. The Freedom House measure was more definitive; a unit root was not detected at any lag length using the ADF test, and the variable is stationary.

Autocorrelation is a concern in all three of the measures, and a lag of the dependent variable is included in all models.

**Vanhanen’s Overall Democracy Measure**

When Vanhanen’s index is used as the dependent variable, financial market development does not appear to significantly improve democracy levels in a nation. In fact, financial market development has a significant and negative impact for the concurrent time period. After five years, however, the direction of the coefficient changes and while insignificant, financial market development has a positive effect on the democracy index. The story changes again after ten years, and the effect is again negative, but insignificant. Finally, after fifteen years, we again see a positive and slightly significant effect. The PCSE model shows significance only at the ten year mark, with a slight negative effect, while the Arellano-Bond estimator shows no significant effects at all. Foreign direct investment has a small, significant and positive effect on Vanhanen’s democracy index, but increased levels of government debt have a deleterious impact. No other controls are significant.
When the results are separated by income level, a different tale emerges. For low income nations, the coefficients are positive for all time lags (the five year period sees the strongest effects with a coefficient of 15.29), but are largely insignificant. In the lower middle income nations, there is an initial and significant decrease in democracy, but this effect changes to a positive value for the remaining time lags. The greatest effect is felt in year ten (coefficient of 18.65), but these estimations are insignificant. With upper middle income nations, it takes even more time for the positive effects to appear. Financial market development decreases the level of democracy until year fifteen when it turns positive, but only the ten year model is significant. The high income nations have the opposite experience; they are significant and positive at the outset and gradually turn negative and significant after ten years.

In the case of low income nations, an increase in the level of financial market development may signal enough market-orientedness and enhanced economic rights that this is enough to generate a positive, if insignificant, result. The mean Vanhanen score steadily increases as income level increases, so small economic gains could translate into small democratic gains.

For lower middle income nations where the decrease in democracy is initially sharp, this might be explained by the somewhat unstable nations that are included in this group. In nations such as Belarus, Kazakhstan, Moldova, and Ukraine, an increase in credit may be enough to fuel unrest and fund opposition activities. The government may increase authoritarian policies as a method of checking this activity. As time passes, the immediate threat to the government may have changed, and democratic reforms increase. Along with this, the citizens may have grown their businesses and
increased their experience enough that there is stronger pressure from the business community for democratic reform. This group has an inherent interest in stability, so the reforms may be less threatening (and thus more successful) at this time.

Several of the upper middle income nations (such as Argentina and Russia) experienced periods of economic rockiness and subsequently obtained IMF and World Bank structural adjustment programs. In order to implement the required reforms, the government may institute more authoritarian policies to prevent disquiet and instability within the nation. Over time, the need for these controls erodes, and the level of democracy may then rise. However, many of these nations are former Warsaw pact members and are now European Union members (this income group includes Poland, Hungary, Romania, and the Czech Republic). Given the democratic requirements for EU membership, the timing of economic transition after the fall of the Soviet Union, and the amount of investment in these nations after the transition, these results are counterintuitive. Further research is strongly warranted in this case, as model diagnostics do not indicate any obvious problem with the model.

High income nations exhibit a positive and significant association with financial market development initially, but after ten years show a contrary effect. These results may be easier to explain; increased financial market development may be the consequence of market liberalization which could have spillover effects and result in political liberalization. After ten years, however, financial markets have a negative and significant effect on democracy. This may be the result of satisfaction with the government, and lower levels of participation and competition, both of which make up this measure. If the population is satisfied with their level of economic activity, then they
are not compelled to actively campaign against the government and form new parties, nor to try to decrease the dominance of the current party. As a caveat, many of the oil states in the Middle East are also included in this category, along with North America and Western Europe. Given the authoritarian nature of these countries, the data may be affected by the presence of outliers.

Overall, my hypothesis is supported by the direction of the coefficients, but the results using Vanhanen’s democracy measure are not significant enough to suggest that there is strong empirical support.

The Freedom House Measure of Democracy

Testing this hypothesis using the Freedom House data provides more substantive support for the idea that financial market development increases the level of democratic development within a nation. While the coefficients are negative for the first two time lags, they are insignificant. Financial market development begins to induce a positive effect on the Freedom House values after ten years, and this becomes significant at the fifteen year mark. GDP growth is positively associated with an increase in the Freedom House score, while increased FDI slightly decreases it. The direction of the coefficients is similar in the PCSE model, but the results are not significant. The Arellano-Bond results do show significance, but the effect is concentrated at the ten year lag.

The effects of financial market development are felt most strongly in the lower middle income nations. At first, there is a substantial and significant decrease in the Freedom House score. As in the general model, this effect persists for five years, and turns positive after ten. By the time fifteen years have elapsed, a large and highly
significant increase in democracy levels is observed. The same pattern holds true for the low and upper middle income nations, but the magnitude of the effects is much smaller, and none of the values are significant. Interestingly, financial market development positively affects high income nations from the start, and the results become significant after ten years. This directly contradicts the results seen in the Vanhanen measure, where high income nations had a significant decline after ten years.

As high income nations have a higher starting value on both the democracy measures and the mean level of financial market development, these nations may attest to the idea that honouring economic rights results in greater rights protection overall. High income nations also have greater experience in financial market development, and thus may not feel the need to restrict these activities to protect either their government position or the population. Since Vanhanen is measuring participation and competition, satisfaction with the status quo could conceivably coincide with an improvement in the rights measures captured in the Freedom House score.

Nevertheless, the results on the hypothesis tests using the Freedom House score provide strong and robust evidence to support the notion that financial market development improves democratic conditions within a nation.

The Polity Measure of Overall Democracy

Using the Polity measure of democracy, I obtained results that contrast with the expectation of my hypothesis. Financial market development exerts a significant but negative effect on the polity measure in the concurrent time period. The direction of the coefficient becomes positive after five years, and the magnitude of the positive effect
increases over time, yet these estimates are not statistically significant. Further, the PCSE and the Arellano-Bond results do not show a significant effect on the Polity measure for any time period, although the direction and size of the coefficients is similar. This sensitivity to model specification lends some doubt to the validity of these test results. Increasing inflation and GDP growth both have a slightly positive effect of democracy, but no other control variables are significant in this model.

When separated by income, financial market development shows a significant effect on the low and lower middle income nations only. For the very lowest income category, there is a positive but insignificant effect at the outset, but a negative and significant effect after five years. The coefficient then changes to positive again after ten and fifteen years, but these values are insignificant. In the lower middle income nations, the negative effects are felt strongly (coefficient value of -62.19) and significantly right away, but the negative effects are mitigated after five years, and a beneficial effect appears after ten years, albeit insignificantly. The lower middle income nations have the strongest effects, both negatively and positively, with the beneficial effect after fifteen years having a coefficient of 37.22.

Both upper middle income and high income nations demonstrate the same pattern for the direction of coefficients, even though the estimation values are not significant for any time period. Both groups show a small negative effect at the outset, after which they see a small positive effect at years five and ten. After fifteen years, upper middle income and high income nations experience a decline in Polity scores as financial market development increases.
Using the Polity score as the dependent variable does not produce any evidence to support my hypothesis. Lower middle income nations experience both deterioration and an improvement to democracy measures, but the effect is not borne out overall. The sensitivity to model specification for this variable tempts one to regard the results somewhat sceptically. The time period used in this study may also not be sufficient to capture the institutional changes that Polity measures, as these “hard” changes generally take more time to implement than either political participation changes or even changes to rights protection. Further research is needed to substantiate this relationship.

Financial Market Development’s Effects on Democracy

The Polity measure, the Freedom House measure and the Vanhanen measure show a similar pattern for the effects of financial market development on democracy in general; financial market development initially has a negative impact, but this changes to a positive effect over time, significantly in the case of Vanhanen and Freedom House. In all cases, the effects of financial market development were noted most in the middle income nations, with low income nations benefiting particularly in the Freedom House measure.

Upon reflection, it is logical that the results of the hypothesis test vary by measure. Freedom House measures political rights and civil liberties as opposed to the outcome based measurements of Vanhanen, or the institutional measures of Polity. The Freedom House results may reflect the fact that changes to political and civil liberties may precede actual institutional changes toward democracy. The time period used in this study may not be long enough to adequately capture the effects of financial
market development on democracy levels. Ultimately, support for the democracy hypothesis is mixed. Financial market development initially causes a decrease in the level of democracy, but over time exhibits a positive and significant influence on both rights protection and outcome measures. The results are robust across estimators that consider endogeneity, but are not supported by PCSE models. This sensitivity casts a small shadow on definitive support for the hypothesis, but is not enough to suggest that the results are spurious.

Institutional Improvement

Hypothesis ten states that an increase in financial market development will improve the quality of government institutions:

\[
Y(\text{Institutional Quality})_{it} = \alpha + \beta_1(\text{Private Credit}_{it}) + \beta_2(\text{Lagged Quality}_{it}) + \beta_3(\text{FDI}_{it}) + \beta_4(\text{Inflation}_{it}) + \beta_5(\text{Debt}_{it}) + \beta_6(\text{Trade}_{it}) + \beta_7(\text{GDP Growth}_{it}) + \beta_8(\text{Population}_{it}) + \epsilon_{it}
\]

As mentioned earlier in this chapter, financial market development creates a stronger middle class with an interest in developing institutions that reflect their needs. These institutions tend to be more democratic, and reflect the needs of a broader base of constituents. In this way, financial markets not only decrease the opportunities for corruption and inefficiency, they create a stimulus for change in institutions to make them more responsive to society. This, combined with the improvements in resource allocation, can create a virtuous cycle where the middle classes are being reinforced by the opportunities offered by good markets, demand changes in the political institutions, and those institutions reinforce the financial system by providing a solid environment for the market to flourish.

I use two measures of institutional development to test this hypothesis: government effectiveness and the burden of regulation. Effectiveness considers how
responsive the government is to the needs to the people, and the competence of the bureaucracy, and higher values indicate greater effectiveness. The burden of regulation considers how much regulatory control the government imposes on business. A higher value here indicates an increasing level of perceived regulation. Both measures are based on survey data, and thus are not “hard” measures of institutions.

Both the effectiveness measure and the regulation measure have a relatively small number of observations and panel unit root tests may not be a good measure of stationarity. While the ADF tests indicate that these series are non-stationary, using differenced values results in suspect test results. As a result, both measures of the dependent variable (government effectiveness and government regulation) use the original, non-differenced value in the analysis.

**Government Effectiveness**

First, I test the model using government effectiveness as the dependent variable. The results show that financial market development has a positive and significant effect on effectiveness levels in the five and fifteen year models. The coefficient at the outset is negative and insignificant while the ten year mark is positive but insignificant. An increase in FDI and GDP growth have positive effects on government effectiveness, while higher levels of inflation and an increasing population decrease the perceived effectiveness of government.

In the lowest income segment, significant effects are seen after 15 years. Surprisingly, the middle income nations see a significant effect much sooner, albeit with different results. In lower middle income countries, financial market development exerts a significant and negative effect initially, but then the coefficient changes direction and
significant and positive effect appears after five years. For the upper middle income nations, a significant and positive effect occurs immediately and continues for five years. In both cases, the significance disappears after ten years. Interestingly enough, high income nations also see a positive and significant effect, but only after fifteen years.

In low income countries, institutions are usually in their infancy. The inherent instability associated with relatively new governments (and often weak legitimacy) may explain why governmental effectiveness is slow in coming. It takes time for a population to accept a government system, learn how it works, and to feel that it is responding to the needs of society. The middle income nations may already have some of the initial government scepticism removed, so the population may perceive improvements in effectiveness more readily. This scepticism may explain why lower middle income nations initially see a negative effect, but upper middle income nations immediately experience a positive impact. For the highest income category that usually have a fairly high level of financial market development, it simply may take more time for the effects to filter down and translate into improved effectiveness ratings. It can also be difficult to separate out the effects of financial markets in complex, diversified economies, so any change in perceived effectiveness may be tied to the long-term results of the economy as a whole. Finally, higher income nations have a much higher level of effectiveness to begin with, so any improvements may take a while to be noticed.

Overall, the results of this test using government effectiveness as the dependent variable lend empirical support to my theory. The findings are robust across a variety of estimators and specifications, giving additional confidence to the reliability of the results.
Regulation

Testing the hypothesis with the perceived amount of regulation as the dependent variable shows that increased financial market development has a positive and significant effect on the level of regulation in a nation, and that these effects are felt through all the time periods in this study. Increasing levels of debt, international trade and population are associated with a slight increase in regulatory levels, while higher levels of inflation resulting in a slightly decrease.

As with the effectiveness measure, increased financial market development affects low income countries differently than higher income nations. Perhaps counter-intuitively, low income nations see an immediate increase in the perceived level of regulation. After five years, the effect is no longer significant, and after ten years, increased financial market development has a negative and significant effect! The negative effect is not significant after fifteen years, but the coefficient is still negative.

The results do not follow the same trend in the middle income nations. Neither lower middle and upper middle income nations reveal an immediate impact on perceived regulation, but they both show a positive and significant effect at the five year mark. For lower middle income nations, the significance of the coefficient drops out at ten years, but is still positive. After fifteen years, the coefficient is again significant and financial market development is positively associated with stronger regulation. In upper middle income nations, the ten year lag is positive and significant, but the coefficient at the fifteen year mark turns insignificant and negative. Increased financial market development does not have a significant effect on regulation in high income nations at any time.
As mentioned before, low income nations have a lower level of financial market development, and the population has a lower level of financial education. It could be the case that any increase in the availability of credit is accompanied by concurrent regulation to assuage the fear associated with a new industry. After ten years, the population may be comfortable enough to lighten the regulatory load. Regulation is a double-edged sword, however, and while increasing regulation can be beneficial to citizens and consumers, too much regulation can strangle the competitiveness of business and artificially increase costs. Very high levels of regulation may also create an incentive for corruption. In low income nations, regulation may provide a way for the government to retain control over the economy while simultaneously “privatizing” it. The elite may see an increase in private credit as an opportunity for graft, and use regulatory policy as a means to siphon off some of these funds. As the financial markets develop, these opportunities are limited, and the regulatory level again falls.

Many middle income nations experienced an economic transition from a centrally planned economy to a market-based system during the study period. Others experienced an economic crisis. In both these cases, the prevailing prescription was for instantaneous and substantial liberalization of the economy and lightening of the regulatory load. Indeed, both these income groups observe a negative, if insignificant, effect at the time of credit infusion. After a few years, it may become apparent to government that liberalization can be carried too far, and they may subsequently increase the level of regulation in some sectors. If the increase in private credit is due to the transition from a planned economy, then increased regulation may also be a
response to the fire-sales of state assets that were often characterized as blatant opportunism in a largely unregulated environment.

These tests provide strong evidence to support my hypotheses, and the results are consistent across estimation methods. However, the low number of observations and the short time span for this data calls for the reader to take a large grain of salt to be taken along with the findings. This test makes an excellent starting point for empirical institutional research, but leaves us with a need for further study with a longer time span to substantiate the results.

Conclusions for the Political Indicators

An increase in financial market development does improve the value of many indicators of political development. Corruption, governmental effectiveness and regulation are all improved when the level of financial market development increases. While there is often a lag between financial market development and these improvements, there is not a significantly detrimental effect at any time. The test results for these variables provided empirical evidence to support the notion that financial market development does lead to political development.

Political participation was the only variable that financial market development did not significantly affect, and did not provide any evidence to support or reject my hypothesis.

The other indicators of democratic development, political competition and measurements of overall democracy, had mixed results. Financial market development initially decreases party dominance, but also decreases the institutional restrictions to political participation. Eventually, an increase in financial market development results in
an improvement in the institutional measures for political competition, but there is no
general effect on party dominance over time. Increased financial market development
generally had a negative effect on democracy at the outset, but turned into a positive
and beneficial effect over time. These effects were particularly pronounced in the
middle income nations. These test results provide some support for my hypotheses, but
the time needed for the full impact of financial market development on democracy may
exceed the years in this study.

Conclusion

Financial market development shows a strong and beneficial effect on many
economic and political indicators of development. In most cases, the beneficial effects
of financial market development take time before they are felt, and there is often an
initial decline in conditions.

There was no support for the idea that financial market development affects GDP
growth or increases GDP per capita, nor was there any support for the notion that
financial market development affects political participation. There was a strong and
robust relationship between an increase in financial market development and a
decrease in poverty, income inequality, and single party dominance. Increased financial
market development also has a positive relationship with political competition,
effectiveness, regulation and rights protection. There may be a positive relationship
between financial market development and other democracy measures, but further
research and a longer time span is needed to substantiate this conclusion.

However, cross-national analysis only reveals general trends, and does not take
account of the context in which these effects occur. More detailed analysis is needed to
fully understand the dynamics of these relationships within the various regions; these are discussed in Chapter 6.
CHAPTER 6
DISCUSSION AND APPLICATION

Introduction

“It was the best of times; it was the worst of times.” Charles Dickens’ introduction to A Tale of Two Cities could very well describe conditions in the contemporary world. Imagine two different countries, each starting out in a similar situation after World War II. Think now of the difference in political and economic fortunes between Latin America and East Asia, or sub-Saharan Africa and the Middle East. Why are these cases so divergent?

This chapter is devoted to exploring the effect of geographic regions on financial market development, economic development and democracy and detailing what the results might suggest for the validity of the previously presented theories and general results. After this discussion, I also provide a case study on Russian agricultural cooperatives provides an example of how financial market development affects political development. The chapter concludes with a discussion on the level of empirical support for the overall theory.

Explaining the Differences between Mature and Emerging Markets

In most cases, the results for high income nations and for the more mature markets of North America, Western Europe and East Asia diverge from the lower income, less developed markets. One possible explanation for these dissonant results is that financial markets differ in their function depending on the level of development. The needs of customers, the types of risk, and main purposes of the markets differ. Let me explain, in a mature market, there are few risks associated with contract
enforcement or capricious government activities. The major sources of risk come from the technological uncertainty of new projects, or from speculative behaviors that cause price distortions. By contrast, emerging markets have a higher level of uncertainty regarding government action and the legal framework for transactions. Thus, the prices reflected in emerging markets take this type of uncertainty more heavily into consideration.

In addition, growth and development in mature financial markets generally comes from technological innovation within finance, and not from expansion of the market itself. For example, credit swaps and exotic derivatives were driven by the need for additional hedging strategies by investors, but the number of players in the market is relatively fixed. In an emerging market, market expansion is key when many potential customers lack access to basic services. Essentially, the needs of the customer are different. A trader at Solomon Brothers might need to hedge a potential change in the interest rate that his company will be charged for a corporate bond, but a farmer in Russia needs a loan to purchase fertilizer for the next planting season.

Finally, wealth is spread thinly in an emerging market when compared to more developed markets. The absolute amount of starting capital is smaller, so financial service providers offer fewer products than the range of products available in a mature market. As such, demand deposit accounts and basic credit functions often appear before insurance services and a basic forward market for agricultural commodities will appear before more exotic derivatives. With lower levels of starting capital, lenders must be careful about the projects they approve since any losses will have a larger magnitude than in a wealthier market. This can be difficult in an emerging market as
lenders are often not as experienced, and the level of asset allocation might not be optimal. In addition, the level of savings mobilization is often lower in emerging markets. Due a distrust of markets, many people prefer to keep their savings in forms other than banks. Further, in a mature system much of the potential savings have already been mobilized. In these markets, the goal of the system is to allocate those resources effectively, rather than basic savings mobilization.

Financial markets serve a supervisory function in both emerging and developed markets, although in a mature market supervision may be less of a concern. In an emerging market where information about corporate governance is scarce, or where accounting of investments is not legally required, the financial markets may act as a strong check on businesses.

In the more developed markets, payments systems are usually highly developed, and the level of information transmission is correspondingly high. In a sense, the financial system has achieved a high level of efficiency in payment systems and reducing transaction costs. For developed markets, any gains in efficiency are incremental and likely to be small.

In the next section, I discuss how financial market development affects political and economic development when the sample is restricted by income category. The World Bank categorizes nations into four income groups: low income, lower-middle income, upper-middle income and high income. The countries are divided on the basis of 2006 gross national income (GNI) per capita (World Bank 2008). A country is categorized as low income if the per capita GNI is less than $905 per year. Countries such as Afghanistan, Bangladesh, Zimbabwe and Somalia fall into this category.
Lower-middle income nations have a per capita GNI between $906 - $3,595 and include nations such as Jamaica, Morocco, Thailand and Honduras. The upper-middle income countries (Argentina, South Africa, Russia and Poland, for example) have a GNI range from $3,596 to $11,115. High income nations include the Organization for Economic Cooperation and Development (OECD) countries and have a GNI per capita above $11,116. This category also includes many of the oil states such as Saudi Arabia and Kuwait. The full list of countries in each category is available in Appendix A. By restricting the analysis by income category, we may get a better idea of how financial market development affects political and economic development differently for nations in various stages of development.

Figure 6.1 shows the level of private credit expressed as a percentage of gross domestic product (GDP - the measurement proxy for financial market development) over time by national income category. While all income categories experience an increase in the amount of credit, the lowest income nations are relatively flat. At the beginning of the study, the average amount of private credit in low income nations was equivalent to roughly 9 percent of GDP. By 2002, this figure rose slightly to 14 percent. By contrast, lower-middle income nations started out at 15 percent, but doubled this amount to 33 percent in 2000. Upper-middle income nations went from 19 percent to 43 percent, and the wealthiest nations increased from 46 percent to just over 100 percent of annual GDP.
This dramatic evidence about the differential importance and role of credit and credit markets in different types of economies suggests strongly that emerging and developed financial markets have substantially different functions in society. For these reasons, it is not unreasonable to expect that different financial markets will produce different political and economic development outcomes across different levels of national income.

Political Development by National Income

It will come as no surprise that higher income nations have a higher level of political development. Figure 6.2 plots the mean standardized Polity score of each national income group over time.
Theories explaining a positive association between economic and political development have been offered by many scholars (Vanhanen (1990) and Rueschmeyer et al. (1992) are just a few examples). Their arguments center on the idea that a certain level of economic development is necessary for political development. My results also indicate that higher income levels are correlated with higher levels of political development, but I conclude that financial market development affects political development through more direct channels than economic development alone. Income alone is not a sufficient explanation for changes in the level of political development.

Results by Income Level

For countries in the lowest national income category, financial market development affects the economic indicators more than the political ones (Table 6.1 reports the coefficients from the panel data regressions for private credit on each of the
dependent variables for all four time periods). Contrary to the consensus on economic growth, I find that financial market development has an initial negative impact on both GDP per capita, and overall GDP growth! At this low level of income, poverty and inequality are strongly reduced after ten years, but show an initial increase at five years. Government effectiveness is strengthened slightly, but financial market development does not have a significant effect on any of the other political indicators.

Table 6.1 Coefficients for Financial Markets on Dependent Variables in Low Income Nations

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Concurrent</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in GDP per capita</td>
<td>-591.000**</td>
<td>142.200</td>
<td>123.000</td>
<td>-110.400</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>-51.94***</td>
<td>7.760</td>
<td>11.070</td>
<td>11.270</td>
</tr>
<tr>
<td>Tertiary Education</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Poverty Levels</td>
<td>-0.994</td>
<td>10.85***</td>
<td>-53.43***</td>
<td>-43.00***</td>
</tr>
<tr>
<td>Inequality</td>
<td>-6.873**</td>
<td>10.30***</td>
<td>-25.73***</td>
<td>-13.80***</td>
</tr>
<tr>
<td>Participation</td>
<td>5.907</td>
<td>5.374</td>
<td>8.556</td>
<td>-6.968</td>
</tr>
<tr>
<td>Corruption</td>
<td>-0.682</td>
<td>-0.200</td>
<td>-0.342</td>
<td>0.213</td>
</tr>
<tr>
<td>Competition - Vanhanen</td>
<td>-5.417</td>
<td>13.830</td>
<td>1.150</td>
<td>14.150</td>
</tr>
<tr>
<td>Competition - Polity</td>
<td>2.314</td>
<td>1.666</td>
<td>2.059</td>
<td>-0.515</td>
</tr>
<tr>
<td>Development - Vanhanen</td>
<td>6.654</td>
<td>15.29</td>
<td>3.909</td>
<td>3.530</td>
</tr>
<tr>
<td>Development - Freedom</td>
<td>-1.391</td>
<td>-23.250</td>
<td>-5.804</td>
<td>2.336</td>
</tr>
<tr>
<td>House</td>
<td>4.883</td>
<td>-62.19*</td>
<td>15.500</td>
<td>-4.945</td>
</tr>
<tr>
<td>Development - Polity</td>
<td>-1.083</td>
<td>1.384*</td>
<td>-0.497</td>
<td>0.770**</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>2.775**</td>
<td>-0.132</td>
<td>-1.639**</td>
<td>-0.486</td>
</tr>
</tbody>
</table>

The income effects for low income countries may be a function of very limited credit levels within the system. For low income nations, the range of credit goes from 9 percent of GDP up to 14 percent of GDP. When compared with high income nations, where the amount of credit can exceed 100 percent, the amount of credit may not be sufficient to generate significant effects. Theoretically, financial market development affects both political and economic indicators, but these effects need not be
simultaneous. In low income nations, the economic variables may change first. Some base level of capital in the system may be needed before the political changes occur. This gives some evidence to support the idea that there is a timing sequence for development, and that timing sequences may be different among the various income strata. Further research on these variables would help to clarify these ideas.

Low levels of base capital are not the problem in high income nations however, where increased credit is also negatively associated with economic development. Here, the reason for credit may play a larger role. In the middle income nations, credit tends to be used for high-return activities such as education or equipment. In high income nations credit is used not just for business investment, but also for luxury consumption. The large amount of available credit may encourage individuals to pursue consumer goods above and beyond what their incomes may justify, and high consumer debt levels may account for the negative effects on per capita income. Table 6.2 presents the results for high income nations.

Table 6.2 Coefficients for Financial Markets on Dependent Variables in High Income Nations

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Concurrent</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in GDP per capita</td>
<td>-646.3**</td>
<td>80.410</td>
<td>145.200</td>
<td>331.000</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>-5.202***</td>
<td>0.497</td>
<td>-0.741</td>
<td>2.659</td>
</tr>
<tr>
<td>Tertiary Education</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Poverty Levels</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Inequality</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Participation</td>
<td>3.550</td>
<td>2.162</td>
<td>-3.466</td>
<td>1.716</td>
</tr>
<tr>
<td>Corruption</td>
<td>-0.035</td>
<td>-1.021***</td>
<td>0.074</td>
<td>1.134***</td>
</tr>
<tr>
<td>Competition - Polity</td>
<td>-0.078</td>
<td>0.011</td>
<td>0.073</td>
<td>-0.151</td>
</tr>
<tr>
<td>Development - Vanhanen</td>
<td>8.427*</td>
<td>1.356</td>
<td>-14.47***</td>
<td>4.278</td>
</tr>
<tr>
<td>Development - Freedom House</td>
<td>0.724</td>
<td>0.501</td>
<td>6.156**</td>
<td>-1.681</td>
</tr>
<tr>
<td>Development - Polity</td>
<td>-0.665</td>
<td>0.131</td>
<td>0.764</td>
<td>-1.651</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>-0.031</td>
<td>-1.279***</td>
<td>0.035</td>
<td>1.097**</td>
</tr>
<tr>
<td>Regulation</td>
<td>0.041</td>
<td>-0.524*</td>
<td>-0.086</td>
<td>0.420</td>
</tr>
</tbody>
</table>
In high income nations, financial market development also has limited effects on the political indicators. While corruption is improved with an increase in private credit, there is no significant change in political competition, institutional democracy levels, or participation. However, most of the countries in the high income category are already classified as strong democracies (with the exception of the oil states), and experience little change during the study period. Indeed, the range for improvement on democracy indicators is a problem here, because the wealthiest democratic nations have for some time essentially constituted the exemplary cases and standards for the democracy ranking schemes. Hence, such cases have not been truly subject to improvement in their scores under the ranking systems used to evaluate nations.

The political and economic indicators of middle income nations show the strongest effects of financial market development. Both lower-middle income and upper-middle income nations experience an increase in GDP per capita and in overall GDP growth as a result of increased financial market development, but only after fifteen years have elapsed. Over time, the lower-middle income nations observe a decrease in both poverty levels and inequality as the level of financial market development increases. The upper-middle income nations show a decline in poverty levels when financial market development increases, but do not experience any significant improvement in income equality as financial markets develop. Tables 6.3 and 6.4 report the results of financial market development on the economic and political indicators for the lower-middle and upper-middle income categories.
Table 6.3 Coefficients for Financial Markets on Dependent Variables in Lower-Middle Income Nations

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Concurrent</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in GDP per capita</td>
<td>-56.800</td>
<td>120.200</td>
<td>-241.8*</td>
<td>287**</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>-3.265</td>
<td>0.433</td>
<td>-11.670</td>
<td>27.72***</td>
</tr>
<tr>
<td>Tertiary Education</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Poverty Levels</td>
<td>3.034</td>
<td>4.562</td>
<td>4.726</td>
<td>-12.59***</td>
</tr>
<tr>
<td>Inequality</td>
<td>0.483</td>
<td>5.280**</td>
<td>3.756</td>
<td>7.950***</td>
</tr>
<tr>
<td>Participation</td>
<td>6.227</td>
<td>-4.580</td>
<td>3.249</td>
<td>8.981</td>
</tr>
<tr>
<td>Corruption</td>
<td>-0.206</td>
<td>0.231</td>
<td>0.201</td>
<td>0.726**</td>
</tr>
<tr>
<td>Competition - Vanhanen</td>
<td>-81.64***</td>
<td>17.100</td>
<td>-9.339</td>
<td>-9.021</td>
</tr>
<tr>
<td>Competition - Polity</td>
<td>-8.391***</td>
<td>-0.180</td>
<td>3.208</td>
<td>6.975***</td>
</tr>
<tr>
<td>Development - Vanhanen</td>
<td>-35.72***</td>
<td>3.493</td>
<td>18.650</td>
<td>5.896</td>
</tr>
<tr>
<td>Development - Freedom House</td>
<td>-25.42***</td>
<td>-4.455</td>
<td>2.165</td>
<td>41.43***</td>
</tr>
<tr>
<td>Development - Polity</td>
<td>-101.1***</td>
<td>-1.422</td>
<td>16.210</td>
<td>37.220</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>-0.489*</td>
<td>1.234***</td>
<td>-0.178</td>
<td>-0.050</td>
</tr>
<tr>
<td>Regulation</td>
<td>0.685</td>
<td>1.144***</td>
<td>0.560</td>
<td>1.892***</td>
</tr>
</tbody>
</table>

In both income categories, the findings suggest that effects of financial market development may take time to appear because the financial infrastructure is still rudimentary. In contrast to the lowest income nations, there may be enough capital in the system to generate improvements in asset allocation and fund higher return investments, but these may take time to accumulate enough of an effect to be significant. Hence, a lag of fifteen years lapses before the improvements in GDP appear. The improvements in poverty occur in the upper-middle income nations first (after ten years), where ostensibly the financial infrastructure may be more developed, and may generate returns faster. For the lower-middle income nations, the decline in poverty levels and the improvement in income equality generated by higher levels of financial market development are significant after fifteen years, again suggesting that a longer time period is required to generate economic returns.
Table 6.4 Coefficients for Financial Markets on Dependent Variables in Upper Middle Income Nations

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Concurrent</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in GDP per capita</td>
<td>-401.6*</td>
<td>72.400</td>
<td>5.384</td>
<td>825.90***</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>-3.798</td>
<td>0.933</td>
<td>2.572</td>
<td>14.79**</td>
</tr>
<tr>
<td>Tertiary Education</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Poverty Levels</td>
<td>-1.207</td>
<td>2.398*</td>
<td>-2.760*</td>
<td>5.136**</td>
</tr>
<tr>
<td>Inequality</td>
<td>1.244</td>
<td>0.375</td>
<td>-1.492</td>
<td>2.619</td>
</tr>
<tr>
<td>Participation</td>
<td>-0.892</td>
<td>2.091</td>
<td>-0.103</td>
<td>3.362</td>
</tr>
<tr>
<td>Corruption</td>
<td>1.677***</td>
<td>-1.013</td>
<td>0.179</td>
<td>-0.425</td>
</tr>
<tr>
<td>Competition - Vanhanen</td>
<td>-10.450</td>
<td>-0.574</td>
<td>-11.71**</td>
<td>2.577</td>
</tr>
<tr>
<td>Competition - Polity</td>
<td>-0.340</td>
<td>-0.088</td>
<td>0.065</td>
<td>2.373***</td>
</tr>
<tr>
<td>Development - Vanhanen</td>
<td>-8.118</td>
<td>2.554</td>
<td>-11.32**</td>
<td>10.440</td>
</tr>
<tr>
<td>Development - Freedom House</td>
<td>-3.054</td>
<td>-2.911</td>
<td>2.307</td>
<td>5.204</td>
</tr>
<tr>
<td>Development - Polity</td>
<td>-3.172</td>
<td>-5.925</td>
<td>-0.775</td>
<td>-3.370</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>0.944**</td>
<td>1.486*</td>
<td>0.113</td>
<td>0.486</td>
</tr>
<tr>
<td>Regulation</td>
<td>-0.518</td>
<td>1.359**</td>
<td>0.562***</td>
<td>-0.430</td>
</tr>
</tbody>
</table>

The political indicators for the middle income nations also show the strongest results for effects of increased private credit. While financial market development does not have an effect on political participation in either income category, political competition is significantly increased for both lower and middle income nations over time. As the level of private credit in a nation increases, lower-middle income nations observe an increase in institutional competitiveness after fifteen years. The upper-middle income nations experience a decrease in party dominance after ten years when financial market development increases, and an improvement in institutional competitiveness is noted after fifteen years. Corruption declines in the lower-middle income countries after fifteen years, and improves simultaneously with increasing credit in the upper-middle income nations. Interestingly, as financial market development levels increase, the lower-middle income nations have a significant improvement in the Freedom House measure of political and civil rights after fifteen years, but the upper-middle income nations do not show a corresponding result. Neither the Vanhanen nor
the Polity measures of overall democracy have a significant effect in the nations classified as middle income. However, both groups show an improvement in effectiveness and regulation when financial market development is improved, with the upper-middle income nations seeing improvement after five to ten years, and lower-middle income nations requiring five to fifteen years.

The rational for the timing of the political results is largely similar to the argument used to explain the economic results; an increase in financial market development may generate changes to the political and economic indicators faster in higher income nations. Thus, the upper-middle income nations saw improvements in competition, effectiveness, regulation and corruption as a result of improved financial market development before the lower-middle income nations did. Since these nations have a broader financial base to start from, the potential effects on the political indicators would theoretically appear sooner than in the low income nations. Unlike the high income nations, however, the countries in these categories have a wide range of political development, with substantial room for improvement. Many of the significant political variables, increased competition, improved corruption, and rights protection, are preconditions for improvements in overall democracy. Given that these often required a lag of fifteen years before an improvement was noted, it is not outside the realm of possibility that an increase in the level of private credit would significantly improve the overall democracy levels if the study period were extended over a greater period of time.

In Chapter 3, I theorized that the middle income nations would see the greatest effect from financial market development. The empirical results of testing largely support
this hypothesis. The results also reveal an interesting trend; the improvements in poverty and in the political variables resulting from an improvement in financial market development require a shorter lag period in the upper-middle income nations than in the lower-middle income countries. The findings also suggest that a certain income level is necessary before the positive effects of financial market development can occur. This implies that the level of existing financial infrastructure is an important determinant in the effectiveness of financial market development, and that this needs to be considered when creating financial market policy.

Regional Results

In this section, I discuss how well the theory holds up using evidence from various regions in the world. The Middle East and Latin America in particular are interesting because they deviate from the theory in opposite ways. The Middle East has a high level of credit available, yet stubbornly resists democratization. By contrast, Latin America has a relatively low level of financial market development, but nevertheless experienced political development. I offer a potential explanation for these two regional effects and discuss the results for all other regions in the following section.

In Chapter 3, I characterized financial market development by describing a typical underdeveloped system. An underdeveloped financial market has a small financial sector relative to the size of the economy, a narrow range of services offered and low levels of access to services by the population. The level of private credit (expressed as a percentage of GDP) serves as a proxy for these financial market characteristics, and for financial market development overall. Figure 6.3 shows the mean regional value for the financial market development measure.
By this measure, sub-Saharan Africa, Eastern Europe and South Asia have relatively underdeveloped financial markets compared to the mature markets of North America, Western Europe and East Asia. As the results for each geographic region show, financial market development has different effects on the political and economic indicators for the various regions. This may indicate that there is some regional context that needs to be taken into account, and may provide some insight into policy development for those regions. The implications of the various regional financial markets are discussed in turn in the following section.

North America and Western Europe

I hypothesized that the benefits of financial market development would taper off at higher levels of development and income. The empirical tests on these regions provide mixed support for this idea. Unfortunately, a methodological problem presented
itself in North America and Western Europe; there is simply not enough variation in these regions to conduct a statistical test. Western Europe, while somewhat better than North America in this regard, lacks data on poverty, inequality, tertiary enrollment and competition. The data from North America are limited to GDP per capita and overall GDP growth.

When the effects of financial market development on per capita GDP and GDP growth are tested, North America shows a continuously negative effect for all time periods, while Western Europe fluctuates between positive and negative effects. The coefficients are not significant for either region at any time. In Western Europe, where some testing of the political variables is possible, financial market development show a significant and positive increase on the Freedom House indicator after ten years, while the Vanhanen measure shows an initial significant and positive increase, but a significant and negative effect after ten years. The Polity score does not exhibit enough variation for statistical testing beyond a simple correlation.

The fluctuation in economic results may be due to the high level of available consumer credit, and the changing use of credit in high income countries. Rather than using credit to fund high-value activities such as education, many consumers use credit for luxury goods that have little to no return on investment. A significant decrease in corruption was noted after ten years in Western Europe, but these countries generally have low levels of overall corruption.

While I cannot point to statistical evidence for support of the hypothesis that states that the effects of financial market development are non-linear and marginal at higher levels of income, there is no also compelling evidence to discard the theory. The
current sub-prime mortgage crisis provides a contemporary example of the possible negative effects of highly developed financial markets, and their ramifications for further study at all income levels.

East Asia and the Pacific

Some countries in East Asia could be considered “poster children” for the theories presented in this research. In Korea, and Taiwan (and to a lesser extent, China), a policy of careful and conscientious state intervention in market development was followed. The levels of credit rise steadily throughout the study, as do the political development indicators. In fact, both Korea and Taiwan exhibit many of the same results on the economic variables as their North American and Western European counterparts. For the region as a whole, however, the results are less compelling. None of the development variables tested are significant across the lagged time periods, and only a few are significant concurrent with the increase in private credit. While an increase in financial market development does not have a significant effect on GDP per capita, it does have a significant and negative effect on overall GDP. Increased financial market development also produces a simultaneous decrease in party dominance, and a decrease in the institutional measure of political competition. Further, increasing levels of private credit have a significant and negative effect on overall democracy that noted in the Vanhanen and Polity measures, but not on the Freedom House measure. There are insufficient observations on the poverty and inequality measures to calculate the effects of financial market development on these indicators. This is unfortunate, as they may have shed some light into these contradictory regional results. Table 6.5 presents the results.
Table 6.5 Coefficients for Financial Markets on Dependent Variables in East Asia and the Pacific

<table>
<thead>
<tr>
<th>Coefficients for Private Credit</th>
<th>Concurrent</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in GDP per capita</td>
<td>-259.300</td>
<td>-191.400</td>
<td>-277.400</td>
<td>103.100</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>-20.63***</td>
<td>-0.994</td>
<td>9.125</td>
<td>-11.800</td>
</tr>
<tr>
<td>Tertiary Education</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Poverty Levels</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Inequality</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Participation</td>
<td>2.984</td>
<td>2.117</td>
<td>-2.054</td>
<td>10.270</td>
</tr>
<tr>
<td>Corruption</td>
<td>-0.015</td>
<td>0.521</td>
<td>-1.050</td>
<td></td>
</tr>
<tr>
<td>Competition - Vanhanen</td>
<td>-49.12***</td>
<td>-3.568</td>
<td>11.830</td>
<td>-16.200</td>
</tr>
<tr>
<td>Competition - Polity</td>
<td>-4.670***</td>
<td>-0.032</td>
<td>1.598</td>
<td>0.083</td>
</tr>
<tr>
<td>Development - Vanhanen</td>
<td>-23.09***</td>
<td>0.379</td>
<td>3.385</td>
<td>2.274</td>
</tr>
<tr>
<td>Development - Freedom House</td>
<td>-9.145</td>
<td>0.181</td>
<td>-6.043</td>
<td>10.660</td>
</tr>
<tr>
<td>Development - Polity</td>
<td>-83.19***</td>
<td>-6.044</td>
<td>22.160</td>
<td>-6.949</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>-1.166***</td>
<td>1.269</td>
<td>-0.372</td>
<td>-0.226</td>
</tr>
<tr>
<td>Regulation</td>
<td>0.998***</td>
<td>-1.649</td>
<td>-0.620</td>
<td>-0.080</td>
</tr>
</tbody>
</table>

The most likely explanation for these results is a function of the data themselves. Countries as disparate as Myanmar, Australia, Singapore and Japan are all included in this region. Some of these nations represent the extreme values for some measures, and might be classified as outliers. For example, Singapore has one of the highest level of private credit to GDP (a mean value of private credit over 90% of GDP and a standardized Polity score of 20) in the entire study, and is a strongly authoritarian government. The Solomon Islands score well on the democracy measures, but have a very low level of private credit (21% of GDP and a Polity score of 74). The data from Laos and Cambodia stand in opposition to the data in New Zealand and Taiwan. Even with these contradictions, however, the correlation between private credit and political development is visually apparent in Figure 6.4. Ultimately, however, financial market development does not generate a significant or consistent effect across the East Asian region.
Eastern Europe and Russia

The results for Eastern Europe and Russia must be considered within the context of their Communist histories. The data in this study date back to 1981, but the years from 1981-1990 include only Yugoslavia, which had a partially open economy. Figure 6.5 shows the mean level of credit and the mean standardized Polity scores for the region.
The level of credit jumps substantially in 1991, and reflects a flood of investment after the fall of Communism. This is accompanied by improvements to the democracy scores up until 1993. However, this region may be an example of the limitations of using private credit as a proxy for financial market development. Much of the credit flows to this region in the early 1990s were speculative and the result of monetary flows from the West. In this region, the credit influx itself may be an “external shock” and not in keeping with my theory.

For many countries in Eastern Europe, the early 1990s were a period of hyperinflation and economic uncertainty as well as a period of political instability. Despite the credit influx, Eastern Europe has a relatively low level of financial market development. This is common when the level of uncertainty is high, and lenders may ration credit to limit their risk. The high level of inflation also made credit costly, as lenders tried to cover their potential losses.
The upheaval during the 1990s represented a stark geopolitical and economic change for this region. My empirical model does not take these types of events into consideration, thus any results from these tests are suspect in their validity.

Sub-Saharan Africa

Sub-Saharan Africa encompasses 47 widely diverse nations, most of which are categorized as low income. This region also has a very low level of financial market development relative to the size of its economy. Figure 6.6 shows the relationship between the amount of private credit and the mean polity score for sub-Saharan Africa. While at first glance the level of financial development appears to take off in the early 1990s, the reader should note the scale. The increase, while substantial, still only represents an increase from ten to roughly thirty percent of GDP. The standardized Polity score also remains relatively unchanged throughout the study.

Figure 6.6 Mean Private Credit and Polity Score for Sub-Saharan Africa
In this region, financial market development does not have a significant effect on GDP per capita or on overall GDP growth (see Table 6.6). Poverty levels are not affected by financial market development at first, but after ten years, the poverty level significantly declines as the level of private credit increases. A similar effect is observed for income equality, only the effects occur earlier after five years and this effect is strengthened after ten years. Increased levels of financial market development improve corruption levels significantly after ten years. However, in a region notorious for its corruption, any significant improvement is a positive development. This, when combined with the results for poverty and inequality, provide some support for the theory that increased financial market development more efficiently allocates resources and provides a higher degree of transparency within a society.

Table 6.6 Coefficients for Financial Markets on Dependent Variables in Sub-Saharan Africa

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Concurrent</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in GDP per capita</td>
<td>-175.200</td>
<td>-7.447</td>
<td>143.200</td>
<td>0.349</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>-13.760</td>
<td>2.220</td>
<td>25.830</td>
<td>18.720</td>
</tr>
<tr>
<td>Tertiary Education</td>
<td>N/A</td>
<td>1.327</td>
<td>-18.04***</td>
<td>-0.081</td>
</tr>
<tr>
<td>Poverty Levels</td>
<td>0.513</td>
<td>1.327</td>
<td>-18.04***</td>
<td>-0.081</td>
</tr>
<tr>
<td>Inequality</td>
<td>0.885</td>
<td>10.07*</td>
<td>20.62***</td>
<td>1.280</td>
</tr>
<tr>
<td>Participation</td>
<td>15.090</td>
<td>-5.341</td>
<td>5.518</td>
<td>-31.59**</td>
</tr>
<tr>
<td>Corruption</td>
<td>1.111</td>
<td>-0.042</td>
<td>4.567***</td>
<td>2.266</td>
</tr>
<tr>
<td>Competition - Vanhanen</td>
<td>-111.7***</td>
<td>89.52**</td>
<td>-40.000</td>
<td>54.660</td>
</tr>
<tr>
<td>Competition - Polity</td>
<td>-5.996</td>
<td>8.699**</td>
<td>2.762</td>
<td>5.418</td>
</tr>
<tr>
<td>Development - Vanhanen</td>
<td>-49.97**</td>
<td>49.55**</td>
<td>-23.320</td>
<td>28.060</td>
</tr>
<tr>
<td>Development - Freedom House</td>
<td>17.490</td>
<td>12.510</td>
<td>18.770</td>
<td>1.805</td>
</tr>
<tr>
<td>Development - Polity</td>
<td>4.468</td>
<td>-77.54**</td>
<td>-17.630</td>
<td>-4.226</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>-0.184</td>
<td>0.533</td>
<td>-0.844</td>
<td>3.780**</td>
</tr>
<tr>
<td>Regulation</td>
<td>1.789</td>
<td>0.033</td>
<td>4.187**</td>
<td>-0.192</td>
</tr>
</tbody>
</table>
Participation appears to decline as a result of financial market development after fifteen years, but this region may be particularly affected by the vicissitudes of the measurement of participation. Sub-Saharan Africa had the highest population growth rate in the world for the second half of the twentieth century, and the total population expanded from roughly 285 million in 1970 to approximately 600 million today (World Bank 2006). Since the measure is collected as the percentage of the total population participating in elections, the actual participation by those of voting age may be understated. In addition, in a non-democratic society where elections do not reflect true political choice, this measure undercounts non-traditional participation and opposition activities.

Political competition (as measured by the institutional Polity measure) increases after five years, and coincides with the improvement in income quality. This adds support to the idea that political development occurs when a population has the resources to compete in the political system, and an added incentive for competition as members of the population have a greater stake in the political outcome of the nation. This is further supported by the increases in governmental effectiveness noted in years ten and fifteen when the level of private credit is increased.

The effects of financial market development on overall democracy are mixed. Financial market development has a positive effect on democracy as measured by Freedom House in all time periods, but the effect is not significant. The Polity measure shows an insignificant increase at the outset, but a positive and significant effect after five years. Subsequent time periods also have a positive coefficient, but are not significant. The Vanhanen measure is more enigmatic; an increase in private credit
produces an immediate, significant and negative effect on Vanhanen’s measure of
democracy, but increasing levels of private credit also have a strong and significant
positive effect after five years.

I suspect that in this region where levels of financial market development,
economic development and political development are low, the financial markets initially
require changes to both the political and economic systems in order to attract
investment. The Vanhanen measure is negative but this measure is composed partly of
the participation measure, and may likely be skewed because of the youthful population
distribution. Overall, this region provides at best fragmentary evidence to suggest that
financial market development does have a positive effect on some economic and
political indicators.

South Asia

South Asia provides some support for the economic theories put forth in Chapter
Three, but the effects are inconsistent and a long delay often precedes any significant
effect. An increase in private credit has an effect on economic development; GDP per
capita and overall GDP growth both show a sharp and significant decline as a result of
financial market development after five years, but an equally substantial and significant
increase after ten years. Table 6.7 presents these results.
Unlike the other regions, however, financial market development has little effect on poverty rates in South Asia. A significant decrease in poverty observed only after fifteen years. The same is true for income equality as an increase in financial market development shows a significant improvement after fifteen years. The effects of increased private credit on corruption levels echo this trend and show a significant improvement after fifteen years. In South Asia, improvements in economic development that result from increased financial market development take time to appear (ten years for GDP), and improvements in poverty and inequality follow after fifteen years. This provides some support for my theory, but the beneficial effects of financial market development require a longer time lag than in other nations. However, financial market development exerts a strong effect on the GDP measures that is not apparent in many other nations. As most of the countries within this region are heavily authoritarian, this may suggest that the economic effects of financial market
development affect authoritarian nations differently than democratic nations. This poses an interesting topic for future research.

Results for the effects of increased financial market development on the political variables are mixed. Participation rates are never significantly affected by financial market development. The effects of increased private credit on Vanhanen's competition measure are significant after ten years, and shows a large increase in party dominance at this time. Not coincidentally, this is also the time lapse after which the positive effects of GDP growth occur. Financial market development also exerts a positive and significant effect on the Polity competition measure, but does so after five years. After fifteen years, an increase in private credit is associated with a significant decline in political competition. As with the Vanhanen measure, this may be the result of better economic conditions, and the population may prefer the status quo politicians. As the Polity measure is based on institutions, the effects may take slightly longer to observe, accounting for the fifteen year delay rather than the ten years required for the Vanhanen measure.

The effects of financial market development on the overall democracy indicators differ by the democracy measurement used. At no time does an increase in financial market development have a significant effect on the Vanhanen measure of overall democracy. The Polity measure of democracy is similar in pattern to the Vanhanen results, but the positive effects of financial market development are significant after five years. The Freedom House measures present the most puzzling results; an increase in private credit results in an initial, substantial and significant improvement in the
Freedom House score, followed by an insignificant and slight decline in years five and ten. After fifteen years, the coefficient is again highly significant and positive.

What may be happening is that greater civil and political freedoms are granted in an attempt to attract investment and capital, resulting in an immediate increase in the Freedom House score. The population then uses these new-found freedoms to demand reform in the political system. In response, the government may curtail some political and civil liberties while simultaneously making changes to the institutional structure captured by the Polity measure. Over time, the financial system develops and the economic situation improves, and the population may again begin to demand reform. The changes to government structure may temporarily mollify the population. Consequently, the need to repress dissent lessens, and political and civil rights may be restored.
These results speak to the potentially destabilizing effects of economic development (Olson 1963), and the precarious balancing act that authoritarian regimes must maintain. The results for this region do pose some interesting questions, and provide an interesting starting point for additional research.

The Middle East

The results for the Middle East region hold some surprises. Financial market development does not have a significant effect on either overall GDP growth or on GDP per capita levels. While the exclusion of Israel results in a significant and positive effect after fifteen years, the time lapse indicates once again that any improvements in economic development as a result of financial market development likely requires several years before benefits are seen. This may be especially true in the Middle East where experience with financial systems may be limited, and where ever increasing oil prices mitigated the need for careful oversight and returns on domestic investments.

Increased private credit significantly exacerbates poverty levels initially, but then has a significant and positive effect after five years have elapsed. Income equality is a different story. In most regions, income equality and poverty rates move together. In the Middle East, however, the coefficients on income equality are significant for all time periods, and the sign on the coefficient changes with each time lag. As the level of private credit increases, there is a decline in income equality initially followed by an improvement in income equality after five years. This is followed by another decline after ten years, and another improvement after fifteen years. One potential explanation for these contradictory results might be the changes in oil revenue distributions. Many countries in this region provide a stipend for all citizens based on the oil revenue
generated. As the demographics of the country change, this may change how income is distributed (more people, the smaller the proportional share). It may also reflect the differing policies of the countries represented in this region. Shifting revenues may be substantial enough to significantly alter the effects of financial market development on the measurement of income inequality. In addition, the number of observations for income inequality is small, and the paucity of observations could distort the results.

Table 6.8 shows the results of empirical testing when the sample is restricted to the Middle East Region.

Table 6.8 Coefficients for Financial Markets on Dependent Variables in the Middle East

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Concurrent</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in GDP per capita</td>
<td>-427.200</td>
<td>-293.400</td>
<td>-648.900</td>
<td>685.800</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>-0.086</td>
<td>-7.276</td>
<td>-2.211</td>
<td>16.730</td>
</tr>
<tr>
<td>Tertiary Education</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Poverty Levels</td>
<td>-4.991***</td>
<td>6.772***</td>
<td>-0.688</td>
<td>4.476</td>
</tr>
<tr>
<td>Inequality</td>
<td>-3.502***</td>
<td>3.370**</td>
<td>-4.028*</td>
<td>7.516***</td>
</tr>
<tr>
<td>Participation</td>
<td>-3.283</td>
<td>6.646</td>
<td>7.960</td>
<td>-1.871</td>
</tr>
<tr>
<td>Corruption</td>
<td>0.643</td>
<td>-0.107</td>
<td>-0.202</td>
<td>0.236</td>
</tr>
<tr>
<td>Competition - Vanhanen</td>
<td>-16.910</td>
<td>0.305</td>
<td>-5.353</td>
<td>46.12***</td>
</tr>
<tr>
<td>Competition - Polity</td>
<td>-0.278</td>
<td>1.371</td>
<td>1.743</td>
<td>2.297**</td>
</tr>
<tr>
<td>Development - Vanhanen</td>
<td>-4.364</td>
<td>-8.250</td>
<td>9.472</td>
<td>23.43*</td>
</tr>
<tr>
<td>Development - Polity</td>
<td>-0.934</td>
<td>5.515</td>
<td>10.690</td>
<td>13.86*</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>0.933*</td>
<td>1.289***</td>
<td>-0.372</td>
<td>-0.226</td>
</tr>
<tr>
<td>Regulation</td>
<td>-0.434</td>
<td>1.914***</td>
<td>0.270</td>
<td>-0.073</td>
</tr>
</tbody>
</table>

Neither political participation nor corruption is affected by changes in financial market development. Interestingly, both measures of political competition are significant after fifteen years, but indicate opposite effects. An increase in private credit is associated with an increase in single party dominance, but also an improvement in the institutional measures of competition. There is no significant effect on political rights.
levels in the Middle East, but increased financial market development results in an improvement in the Polity and Vanhanen democracy measures after fifteen years. The Polity measure increases by 2.297 points, and the Vanhanen measure increases by a rather substantial 23.43 points on the standardized score.

Several factors could be at play in this region, and may provide some explanation for these results. First, the presence of Israel presents a strong contrast in political development when compared to the other nations in this region. Excluding Israel from the region produces a very different set of results, and a change in the level of financial market development no longer has a significant effect on the political indicators. The significance of the economic measures also changes. When Israel is excluded, financial market development has a significant and positive effect on overall GDP growth after fifteen years. Both an increase in poverty levels and increasing income disparity are still noted, but with a larger coefficient.

Next, the structure of the financial system itself is directed at external credit rather than lending to the internal market. Islamic banking rules, particularly those regarding credit, may well modify the use and function of the financial system. Oil, as the basis for wealth in the region, is a non-mobile asset and may cement elite control over both the financial and political systems. Finally, the extent of the public sector and the low level of private sector employment may result in a substantial disincentive to oppose the ruling regime. Figure 6.8 shows the relationship between private credit and democracy in the Middle East.
In most cases, the level of credit within a nation is a good proxy for the level of financial development. Credit is generally directed internally, and financial system deposits (collected from the local population) are redirected through lending activities. The amount of savings mobilization and domestic reinvestment is usually proportional, however, this is not the case in the Middle East. With the possible exception of the United Arab Emirates (UAE), the vast majority of credit in the Middle East is directed toward foreign investments, where ostensibly the possible returns are larger, and where other investments can provide a hedge against volatility in the oil market. With the rise in oil prices, the amount of money available for investment is huge relative to the size of the non-oil economy. The highly religious nature of the Middle East further compounds this problem. Islamic law has very particular conditions for how credit is allocated and priced (Al-Omar and Abdel-Haq 1996). Extremely religious segments of society,
typically those with low levels of education and unemployment, may eschew credit altogether. The lack of demand for domestic credit, coupled with an unfavorable rate of return, could indicate that financial market development in the Middle East is not nearly as extensive as the surrogate measure I use implies. I was unable to locate data on the penetration of banking services within the population, but the limited information I found suggested that it was indeed relatively low. The UAE, the most developed and most liberal of the Middle East economies, introduced consumer mortgages for the first time in 2005 (PWC 2005) and these loans constitute less than 7 percent of the total credit available in the country. The banking industry is also highly concentrated, and there are few new entrants to the market.

The bulk of wealth in the Middle East is by and large the result of oil revenues. Boix (2003) finds that elite control over non-mobile assets is associated with higher levels of authoritarian control. With oil revenues paying for most, if not all, government spending, elites can control a significant portion of the economy. The public sector is the primary employer in the region, and is responsible for 40 to 70 percent of the employment in a country (World Bank 2004). With an increasing unemployment rate (the regional average hovers between 15-20 percent) and few prospects for private sector employment, individuals may be disinclined to engage in any activities that challenge the system.

The entrenched nature of state employment and control over economic resources mean that political and economic reform efforts are limited. However, if the price of oil should collapse, the system would become untenable, and economic and political changes might well result. The likelihood of this scenario is debatable,
however. As I write this, the price of oil hit a new record high with no foreseeable decline in sight.

Latin America

The Latin American case is perplexing, as the effects of financial market development are very inconsistent with theoretical expectations. Latin America has a low level of financial market development relative to its income, yet it also has a relatively high level of political development. This is effectively the opposite of the Middle Eastern case, where there is a high level of financial market development combined with a low level of democratic development. I will report the results of the hypothesis tests first, and then attempt to explain the levels of financial market development on political development.

In this study, the Latin American region does not show any significant correlation between financial market development and political development, although there are some significant effects on the economic variables. At the same time, no one would argue that these nations were politically stagnant during the past three decades. The Latin American region was a primary target for credit flows beginning in the 1970s, and also experienced a series of severe financial crises during the study period. Debt, inflation and massive economic restructuring throughout these years could possibly explain the observed lack of financial market depth. It does not, however, explain the high level of political development that Latin America exhibits despite these economic difficulties.

Financial market development has a significant effect on per capita GDP growth, but the direction of the effect changes over time. Initially, an increase in credit
significantly decreases GDP per capita and overall GDP growth. After fifteen years, however, the effect reverses itself, and an increase in financial market development has a positive impact on both overall GDP growth and per capita income. Increased credit exacerbates poverty levels after five years, but then significantly lowers the poverty rate at the ten and fifteen year marks. Further, the coefficient goes from -6.1 in year ten to -21.42 in year fifteen, indicating that the positive effects of credit increase over time. Higher levels of financial market development generate significantly higher levels of income disparity after ten years (see Table 6.9).

Interestingly, corruption levels within Latin America are improved with an increase in the level of financial market development. The effects are significant both at the outset, and after ten years. In addition, an increase in financial market development improves both government effectiveness and the level of regulation in Latin America after ten years. These results are strongly in keeping with my theory; with higher levels of financial market development there is less incentive for corruption on both the supply and demand sides. This could also be evidence of a “virtuous cycle” in institutional development, where the improvements in transaction costs and efficiency spur further institutional reforms.
Increased financial market development does not affect political participation or competition at any time, nor does it have a significant effect on the Vanhanen or Polity measures of overall democracy. Increased credit is associated with a decrease in the Freedom House rights measure in year five. Given that no other time periods are significant, I suspect that this contradictory result may be a consequence of an anomalous statistical event rather than an overall trend. This notion is further substantiated by the lack of significance in either the PCSE or the Arellano-Bond models for this dependent variable. Figure 6.10 plots the mean Polity score for the region along with the level of private credit.
As I previously alluded, Latin America is an enigmatic region for development studies. In the next section, I attempt to explain the low level of financial market development, and follow this with a possible explanation of the political situation.

While the region might appear to have adequate financial markets, Latin America lags behind other regions in consumer credit access. Only one-third of the adult population has a bank account of any type, and household credit is roughly 9 percent of GDP. This compares with 12 percent in Eastern Europe, 27 percent of the emerging markets in Asia and 58 percent of the OECD nations (Federal Reserve Bank 2006). Latin America is also notorious for its economic troubles. After a series of currency devaluations and periods of high inflation, the Latin American population developed a strong distrust of the domestic banking system. Many investors choose to send their savings out of the country in an attempt to preserve its value, and a furtive mini-industry sprang up to facilitate capital flight and subvert any capital controls in the region. This effect still resonates today. When companies have the ability to finance internationally,
they do so more often in Latin America than in other nations. This undermines the
domestic market by removing the larger (and, if they can find foreign financing, less
risky) companies from the investor pool. This undercuts the risk management function
of a market. As a result, smaller domestic companies have very limited access to
credit, and a smaller, weaker pool of potential investors.

There are also structural weaknesses in the region’s financial sector. The level
of banking competition was much lower than in other emerging economies, which
meant that a few large banks controlled most of the credit allocation (De Rato 2007).
Thus, they could charge much higher interest rates as consumers and businesses had
no alternative. In addition, the banking system did not engage in any form of
information sharing, making it difficult for dissatisfied customers to change banks, and
making cross-bank transactions difficult and costly (if not profitable for the banks
themselves). The variety of financial institutions is limited, and bond and derivatives
markets are lagging relative to other peer regions (Torre and Schmukler 2007). Finally,
the legal and contract environment are weak in the region particularly for creditor
protection, and laws in several nations offer debtors ways to limit collection (Pinheiro
and Cabral 1998). This further creates an unattractive investment climate resulting in
lower levels of financial market development (Padilla and Requejo 2001).

Not all Latin American countries fit into this mold, and there is considerable
variation within the region. Brazil and Chile have some of the most sophisticated
derivatives markets in the world. Chile has made substantial progress in encouraging
long-term investment by developing new mutual funds and specialized pension funds.
Even with these advances, however, the region still struggles with overall financial development.

Turning our attention to the political situation yields some possible explanations for the level of democracy observed in Latin America. To begin, the region has a long, if unstable, relationship with democracy. During the debt crises, many lender nations supported debt-relief programs for democratic Latin American nations as a way to ensure their survival (Roett 2003). This could shore up support for democracy while the economic situation deteriorates and generate political development even when the level of financial market development is low.

There is also a question of geographic proximity to the U.S. In recent decades, the U.S. began to encourage formal democratization in Latin America (Booth, Wade and Walker 2006). In this case, there was some pressure for political reform from outside, and development might have occurred regardless of the level of internal financial market development.

The Catholic Church and its liberation theology also played a role in Latin American democracy. Conferences in Medellin (1968) and Puebla (1979) explored the ideas of social justice and egalitarianism from a Church perspective, and pushed for a democratic agenda within Latin America (Souza 2007). Europe, too, pushed for democratization in the region, as did some of the aid and development agencies (Youngs 2002). All of these groups provided a strong incentive for democracy despite the economic and social conditions of the region.

The low levels of overall financial market development may explain why an increase in credit is not associated with improvements in overall democracy, even
though it may improve institutional efficiency. The external pressures for democracy might have overshadowed the effects of financial markets, especially given the mistrust in the banking system generated by years of economic crisis. However, improved financial markets do have a positive impact on GDP growth, and poverty levels. This, along with the improvements in corruption and effectiveness, suggests that as financial markets develop, they may yet contribute to further political development in the region.

Financial Markets and Development

The regional and income level results example show that there is enough evidence to at least partially support the notion that financial markets have both an indirect and direct effect on political development. My results show that, at certain levels of national income and in several regions, financial market development may spur domestic development by improving the internal conditions of a nation (such as the income equality, political competition and institutional effectiveness), and may have a positive effect on poverty levels in several regions. The next section provides some case study evidence of the effects of financial market development, and describes how the causal mechanism works within Russia.

The Seeds of Democracy - An Example from Russian Agriculture

Once hailed as the center of transition, Russia is better known these days for its increasingly authoritarian government. Yet, there are signs that democracy is developing locally despite the concentration of power at the national level. In this section, I explore the microcosm of Russian agricultural credit cooperatives, and explain how these organizations are affecting their local political environment. First, I provide some background information on banking, agricultural finance and land organization in
Russia. Then, I detail credit cooperatives’ role in economic and political development and the “bottom-up” push for democratic reform.\textsuperscript{18} This section concludes with a summary of the lessons we can take from the Russian case and a discussion of the implications for the general theory outlined in this dissertation.

Background

The world’s largest country by landmass, Russia is governed under a federalist system. The country is divided into 85 republics, krays, and oblasts, all of which act as the second tier of administration. These \textit{subyecty} have widely varying degrees of autonomy within the Russian Federation with some under the direct control of Moscow (Moscow city), and others virtually autonomous (such as Tatarstan) with their own president and parliament. Not surprisingly, there is tremendous variation both in the level of regional development and in the operation of agricultural financing. Most regions have some type of co-op system, but some, such as Nizhny Novgorod, are completely dependent on federal agricultural programs. Rules and regulations regarding credit also vary substantially by region.

Credit co-ops in Russia operate like many credit co-ops in the US. These institutions are financial organizations that are owned and operated by its members, and serve many of the same functions as a commercial bank. In Russia, credit cooperatives are set up largely to provide agricultural credit to farmers, and can be a viable alternative to commercial banking prospects.

\textsuperscript{18} Much of the information in this section is the result of interviews and conversations between Russian individuals and USDA employees (including myself), and is sourced from both personal interviews and archived reports from 2004-2007. The names and exact locations of the individuals and organizations are withheld to protect the confidentiality of the informants.
Commercial banks in Russia do operate in the agricultural sector, but in most cases will only open accounts for very large enterprises. The cost of a loan from a commercial bank is usually less than what the co-ops charge because of federal subsidies, but limited access and informal requirements (tied to political connections) mean that most small and medium-sized enterprises and individual farmers are unable to use their services. In addition, Russian banking laws have a quirk that poses a serious problem to agricultural debtors; by federal law, all accounts must be settled by December 31. Commercial banks will call the loans due on or before this day. Knowing that the farmers must sell their crops to pay their loans, commodities brokers take advantage of this law and offer very low prices for harvested crops. Since agricultural co-ops are not covered under commercial banking laws, they have no obligation to call in their loans prematurely. Credit co-ops charge anywhere from 24-40% on loans and pay 20-35% on deposits, so the real rate of return hovers around 5-10%. This, along with the flexibility generated from the banking law exemption, means that co-op loans are more financially competitive than the published bank interest rates would indicate.

Co-ops generally extend small loans (30,000 – 250,000 Russian rubles or RUR), although some very large co-ops may be able to offer larger principle sums. They also may offer additional services such as insurance and restructuring assistance for bankrupt enterprises. While most loans are used for farm production, other loans are granted for consumption purposes, such as weddings or tuition fees and books. Co-ops also vary in size, with smaller ones boasting a few hundred members and one million RUR in deposit (approximately $250,000 US dollars) to organizations with five thousand members and 100 million RUR in deposits.
The seasonality of demand presents a problem for co-ops as demand for agricultural credit peaks during the planting and harvesting season. Even though most co-op loans are small, some larger loans are granted for equipment and heavy machinery. Unlike the smaller loans, these usually require some form of collateral. Default rates for co-op loans are surprisingly low; some organizations claim to have no defaults, but most co-ops report a 3-5% default rate.

Since the amount of funds available for lending is dependent on the sum of deposits, increasing the pool of available cash is a priority for co-op managers. The majority of deposits come from pensioners in the region. Many retirees in the rural regions maintain small private plots and live off proceeds from the sale of their products. The interest earnings on co-op deposits provide retirees with income over and above their pensions, and provide an incentive for the pensioners to invest their savings. Unfortunately, the demand for credit greatly exceeds supply, and increasing the pool of deposits is a universal concern for these organizations. One possible solution, using federal money to fund the co-ops, is a source of heated discussion among co-op managers. Some argue that federal funding is essential to satisfy the demand for credit, while others are vehemently opposed to the idea on the grounds of increased national oversight. Most co-ops, however, are largely focused on getting the “mattress money” out of homes and into the co-op system, and also encourage investment by the larger farming enterprises. To this end, some organizations provide their depositors with services such as fuel delivery and truck rental to encourage participation.

The organization of credit co-ops varies by region, but most operate as a branch system with representatives in various towns. The branch structure is important to
these agricultural co-ops because the lack of access to a commercial bank is a serious impediment in the Russian financial system. A farmer may not be able to travel several hours (and given the size of Russia, sometimes a few days) to file a loan application. Most bank applications must be made in person and loans are rarely approved instantaneously, making numerous trips to the bank necessary and expensive. By employing a local representative (and giving him the authority to approve smaller loans on the spot), the co-ops offer the only real access to credit for many rural enterprises. The co-ops exemption from some banking regulation also provides another advantage; the loan process is much less onerous and less bureaucratic which expedites the loan process considerably.

Local access also forms the backbone of the credit co-op system: personal knowledge and trust. One manager said that people trust co-ops because they know who is borrowing the money and who is likely to pay it back. Consequently, the investors have confidence that their money is safe, no small feat in a crisis-plagued nation such as Russia. Co-op representatives are members of the local community, and have extensive knowledge about their potential borrowers. Trust in the co-op representative is essential not just for generating deposits, but also enables the representative to make good decisions about loans and in secure repayment. One oft-cited reason for the low default rates is the use of peer-pressure to encourage dilatory lenders to pay up. Co-signers are often required for any loan, and co-op officers make it a practice to pressure the co-signers when a payment is late. Another organization uses the demand for limited credit as an incentive for repayment; the list of creditors is posted, and as they are repaid, the next person on the list receives a loan. In the case
of late payments or default, the waiting list is notified so that they know who to blame for their lack of credit! It is hard to imagine such a system in the US where financial privacy laws are prevalent, but in the small, rural communities of Russia, it works quite effectively and with few complaints.

Co-operative Effects on Development

Credit cooperatives serve the same functions as other financial institutions. They mobilize savings, facilitate investment, diversify risk and transmit information. By providing services to enterprises and individuals who otherwise lack access, co-ops foster the adoption of better technology, equipment and human capital that results in increased productivity and economic growth.

Since co-ops are rarely funded with government money, efficiency and a strong return on investment is emphasized. This has two benefits: first, funds are likely to be allocated to the best projects, and moral hazard from government slush funds is avoided. Second, since co-ops are dependent on deposits rather than government funding, they have a greater accountability to their investors. Consequently, the entire process is more transparent and open to scrutiny, and may generate a demand for similar transparency in other institutions. Inter-cooperative information sharing is emerging, and highly localized versions of a credit bureau are forming. This helps reduce transaction costs further, and may remove some of the subjectivity from lending decisions.

Credit co-ops also influence political development more directly. One manager in the Samara region said that co-ops are based on a one man-one vote system and are organized around democratic principles. As agricultural co-op representatives often
become local leaders, they bring these democratic ideas into local administration and to the population in general. Another member in a different region said “A revolution is underway. We’re taking over rayon (an administrative district similar to a state county) regional political structures. Co-op leaders are beginning to run for political office and are defeating entrenched candidates since they are trusted more.” This experience at the local level gives potential candidates the opportunity to practice democratic governance. Democratic learning also occurs within the larger community as well. Since the co-ops are democratic organizations and are relatively transparent, the individual members become socialized to democratic norms.

This is particularly important in the rural Russian community. In fact, the local government is responsible for much of the physical infrastructure. Given their limited budgets, many enterprises have historically provide their own roads and services. In one rayon in Tatarstan, for example, a group of 21 farmers agreed to take over responsibility for the social infrastructure in the region. They used the same transparent process from the co-ops to build schools, roads and medical facilities. This transparency takes on an added urgency given the political socialization of the average Russian citizen. Tax collection rates are relatively low as tax compliance was not prioritized within the Soviet Union. The state provided most necessities, and the population often does not make the link between tax payments and structural development. As one farmer notes, “we’re trying to teach people that they have to pay taxes to get social services.”

Despite the benefits of local co-ops, problems at the national level may check the growth of these organizations. The national legal environment is not strong, and both
property rights and contract enforcement are somewhat arbitrary and weak. The legal status of the cooperatives themselves is shaky, and some have been chastised when they expand into other services that the commercial banks view as their domain. Most administrative regions in Russia lack a system of land title registration, thus making the use of land as collateral impossible. This not only reduces the loan options an individual has, it also precludes the development of a mortgage market in Russia (although this varies greatly by region). The lack of other types of financial institutions can also prove problematic for farmers, as co-ops are largely prohibited from any type of derivative financial activities. One farmer was particularly concerned with wheat prices this year, as he had devoted several additional fields to the crop. When I asked him why he didn’t use a futures contract to forecast and smooth his income, he replied that domestic futures markets simply did not exist. The lack of legal contract enforcement in Russia means that farmers and grain refineries do not trust these agreements enough to hand over product without a simultaneous payment.

Of less legal consequence but still a serious impediment to financial development are the cultural constraints to cooperative activity. In the Russian language, kolkhoz means cooperative, but was also the legal and formal term given to the large collective Soviet farms that brought disaster to millions after the Revolution. Kolkhoz is also used to derogatively refer to an unskilled farm worker or to rural drunkards. Some people believe that the agricultural co-ops imply a return to collective farming, and the population occasionally requires some education on the co-op concept.

In summary, the development of financial services in rural Russia is fueling both economic and political development. This might be termed democracy from the ground-
up, as agricultural co-ops have a direct link to increased participation, greater accountability, political competition and the development of democratic norms. Even in an increasingly authoritarian national environment, financial market development may still positively foster political development.

Conclusion

Both the regional results and the Russian example show that there is enough evidence to at least partially support the notion that financial markets have both an indirect and direct effect on political development. My results show that, at certain levels of national income and in several regions, financial market development may spur domestic development by improving the internal conditions of a nation (such as the income equality, political competition and institutional effectiveness). Further, policies that support the development of financial organizations may foster political development even in authoritarian environments.

As theorized in Chapter 3, financial market development may also work at the international level by serving as a filter on global capital flows. This may either prevent or mitigate the effects of volatile capital swings, and allow for the global distribution of technology and competitive products. While this research primarily investigates the effects of financial market development on domestic measures of development, future research should examine the international context of these effects.
CHAPTER 7
SHifting the development paradigm

...in the end, good policy is good politics.
-Jose Pinera, 1994

Introduction

Schools of political economic thought have shifted from the classical models of Ricardo and Smith to the reactionary economics of Marx, from the interventionist models of Keynes to recent neoliberal ideas of global liberalization and state non-interference with the markets. In the wake of the financial turmoil in the 1990s, many of the neoliberal orthodoxies have become suspect. This study is a product of recent qualms about the neoliberal approach to development, the variation in development levels across countries, and the difficulties of creating policy prescriptions that foster development.

Summary of Theory and Results

The first few chapters explored the intellectual history of certain aspects of theory about political and economic development. From this literature, I derived a theoretical explanation for the relationship between financial markets and development. I broadened this premise to include ideas about the broader role of the state in development. More specifically, I argued that financial market development leads to political and economic development, and that the effects are non-linear and likely to be concentrated in middle income and emerging economies.

Empirical testing of the data reveals that financial markets do play a role in economic and political development. Further, these effects vary by region and state income levels. Financial market development has the most substantial impact on
reducing poverty levels and income inequality. It also substantially increases political competition, and institutional quality. Over time, financial market development is also associated with an increase in overall democracy levels. The tests for overall economic growth, human capital development and political participation did not show a strong relationship between these variables and financial market development.

Financial Markets and Development

Many theories of political development focus on economic development as an engine for democratization, or as a pre-condition for political change. Financial market development theoretically leads to economic growth, and thus indirectly contributes to political development. Financial market development is thought to improve economic development by allocating resources more efficiently, and leads to higher return investment because financial markets allow for project risk to be shared. Financial markets also may reduce the level of uncertainty in the market and, in low-income countries, boost the rate of capital accumulation. Financial market development also disproportionately helps smaller firms by providing access to credit at competitive rates.

The hypothesis tests conducted in this research, however, do not find general support for the idea that an improvement in financial market development results in an increase in economic growth. While the results suggest that financial market development positively affects economic growth over time in middle income nations, high and low income nations see a negative effect. This may reflect a different use of credit in these nations.

These results are somewhat in keeping with my theory regarding the unequal benefits of financial market development for different income categories. Lower income
nations do benefit from financial market development, but the lack of improvement in very low income nations indicated that a certain level of initial capital may be needed for these results to take effect. The amount of time needed to see an impact on the economic measures also varies by region as well as income. Eastern Europe experienced significant and immediate improvements in gross domestic product (GDP) per capita when the amount of private credit increased, while Latin America saw an increase only after fifteen years. This suggests that there exist factors in the structure of these markets that affect the action mechanism of financial market activity. Exploring these differences is an abundant topic for future research.

My results strongly support the idea that financial market development decreases poverty. Two channels are likely responsible for this at: an overall economic boost and improved credit conditions that revise the distribution of income. Better access to credit allows those segments of society who were previously lacked credit to fund higher return activities and businesses. Like other economic effects, however, the different regions had variations in the timing of the effects. After an initial increase, low income nations experience a decrease in poverty rates decrease roughly ten years after financial market development. The middle income nations also saw a decline in poverty after ten years, but did not experience the initial increase like the low income nations.

Why is there a delay between financial market development and poverty reduction? First, the access to credit may fund business ventures that take some time before a substantial return is generated. As businesses grow, they expand and generate additional employment, and the infrastructure is improved, allowing more
business development. In the lowest income nations, the initial credit funds may be used to finance the basic infrastructure for the economy. The subsequent reduction in poverty occurs after this is complete.

In the case of upper-middle income nations, the results indicate that an increase in credit can exacerbate the level of poverty after fifteen years. I surmise that in these nations, the increase in private credit occurs largely in the consumer credit sector. However, in many middle-income nations, these new consumer-oriented financial products are introduced to a population with a relatively low level of financial education. The targeted population may not fully understand the implications of credit, take out loans that they are unable or unwilling to pay back, and suffer an economic decline as a result. The demand for credit increases as a population becomes aware of the consumer products, and the financial sector, understanding the risks associated with these loans charges a premium, making the debt even more untenable. Even the most advanced financial systems are prone to this; the recent international financial instability associated with US sub-prime mortgages is a prime example of this phenomenon.

My results also provide general support for the idea that an increase in financial market development results in greater income parity, but that greater equality takes time and comes only after a period of increased inequality. The low income nations saw the greatest increase in parity, but this effect was reversed in the middle income nations. A lack of data prevented me from testing this hypothesis for the high income nations. Latin America and the Middle East experienced greater income inequality when the level of private credit increased.
In theory, decreasing poverty should result in an increase in the size of the middle class. Further, greater income equality means that economic resources are being distributed to a wider percentage of the population. This dispersion of resources and increase in the size of the middle class increases the political competition within society, an effect shown strongly in this research. In other words, economic resources translate into political resources, an idea developed by Vanhanen (1990, 2003), or into class relationships that advance the political and economic inclusion of organized working and middle class groups (Rueschmeyer et al. 1992). This means that an increase in financial market development should improve the indicators of political development, an idea supported by the test results in this study. Increasing private credit over time results in lower corruption levels, increased political competition, greater rights protection, higher levels of democracy and improved levels of governmental effectiveness and regulation overall. As with the economic variables, these effects required a lapse of several years before the significant and beneficial effects were observed.

Increased financial market development may be associated with stronger socio-economic rights, a component of civil liberties within society. This would explain the impact of financial market development on the Freedom House measures of democracy. Financial market development also significantly increased Vanhanen’s measure of overall democracy, but not the Polity measure. In fact, an increase in financial market development was significantly associated with an initial decrease in the Polity score, although these effects do not persist after the initial time period.
My theory posits that the political changes are the result of an increased middle class with the resources and the incentives to participate in a competitive political system. Given the time lag between financial market development and economic development, it is not unreasonable to think that the effects on political development would take even longer to appear given that the operators for political change are theoretically contingent on the economic ones having an effect on the citizenry. Schumpeter suggested that the full effects of financial market development on economic growth are not apparent for 30 years (Schumpeter 1934). Extending the time frame of the research could help to settle this question, and this analysis should be conducted as soon as data are available.

Financial market development does have a positive effect on government and effectiveness and regulation in this study, and this adds some additional support for the idea that financial development may exert a positive influence on institutional development. Financial markets may act as a mechanism to reduce transaction costs by removing uncertainty and increasing the amount of available information. Government institutions may be able to use this information to better allocate resources in a manner that more effectively responds to the needs of the population. I also theorized in Chapter 3 that a virtuous institutional cycle might result from a stronger, more demanding middle class in which the demands for more effective government institutions would in turn generate institutions that support the market (i.e. regulatory and supervisory institutions). The hypothesis tests revealed broad evidence for this idea; a general and significant increase in regulation occurs when financial market development improves. While the regulatory measure has some negative connotations
(it is described as the regulatory burden on business), it provides an overall indicator of the regulatory environment within a nation. Since deep financial markets require a high level of supervision and regulation to fully realize their potential, an increase in regulation can be interpreted as an improvement in the institutional structure of a nation.

The increase in political competition may also provide an explanation for the increase in government effectiveness. When more competition is present in the system, each side has an incentive to provide a higher level of service to stay in power. In addition, as financial markets develop and the population develops a stronger stake in society, the population may be more vocal in their demands, and require a higher degree of government effectiveness than before.

When the data on corruption are tested, I find that financial market development has a positive and significant impact on reducing corruption. In Chapter 3, I argue that the high degree of transparency and accountability present in a well-developed financial market system should eliminate the informational asymmetries that would allow corruption to flourish. I also argue that a well-developed financial market should eliminate some of the need for corruption, as credit would be allocated to the best use of resources regardless of political connection and that financial market development would reduce the cost of credit, making corruption less necessary. Despite the significance of the test results, the data for corruption are limited, covering only ten years. Not all nations are accounted for in this measure, so it should be very worthwhile to revisit this hypothesis as more data become available.

In the end, the evidence shows that financial markets have a strong effect on the political and economic development of a nation. While these effects are strongest for
improving the preconditions for democracy, there is also a demonstrable and direct
effect on political development. The empirical tests also reveal the divergent effects of
financial markets on different regions and income groups. These results support many
(but not all) of the theoretical ideas presented, and many of the hypotheses warrant
additional research to further explicate the relationship between finance and
development.

Major Contributions of this Research

This research underscores the idea that financial markets are inextricably
embedded in the social and political functions of a society. It fortifies some of the ideas
about the relationship between financial market development and economic
development by providing further evidence of the relationship between credit, poverty
and inequality. Perhaps more importantly, this research demonstrates a substantive
relationship between financial market development and political development. This
introduces some new ideas into the discourse about the causes of political
development, and provides some general support for the theories presented in this
work. My empirical conclusions also suggest that this subject may be a fecund area for
future development research. Finally, my results indicate the need for the development
of better data in cross-national research, particularly with respect to human capital and
political participation. Additional time periods are needed to fully investigate the long-
term effects of financial market development.

Possible Policy Prescriptions

We can draw some policy implications from this research. If financial markets
can promote economic and political development, then both the international community
and the domestic regime should employ policies that encourage financial market
development. In doing so, policy makers need to acknowledge that some of the ideas
behind the Washington Consensus are at best ineffective, and at worst, create an
environment ripe for conflict and misery. Development, broadly conceived rather than a
single mided focus on economic growth, must be the consistent goal behind state and
international action.

States can improve financial markets, and international non-state actors can
improve markets if states are incapable or unwilling to do so. For states wishing to
develop, there is an obligation to work to create institutions that develop the financial
markets and more broadly manage the effects of globalization to the benefit of their
population. Particularly in cases where the resources of a government are limited,
fostering financial market development may provide one of the highest development
returns on investment. By putting resources into better legal institutions, regulation, and
rebuilding trust through deposit insurance programs, a nation can then allow the
markets to better allocate resources, decrease poverty, foster technological
development, and encourage long-term investment in the country. This would eliminate
some of the burden from the state for these expensive activities, and likely have better
results. Government can then direct its resources to projects that have greater
collective action problems, such as infrastructure development. The financial markets
can also act as a check on corporate behavior, and provide some oversight of private
entities when the government is unable to do so.

For nations that are more resistant to the ideas of political openness, the
international institutions can be used to persuade these nations to adopt financial
development frameworks in a non-threatening manner. By presenting these ideas as a
win-win situation (the leader gets a mollified population and can claim credit for
decreased poverty and increased equality), the international community may be able to
elicit cooperation from some of these states and improve the quality of life for these
populations. Eventually, such changes might contribute to a democratizing shift in
regime. Financial market development may also provide a backdoor to political
development in closed or authoritarian societies. Few elites can resist the allure of
economic development. This enriches the elites, and also placates the masses. When
financial development is structured so that it benefits the broader population as well as
the elites, it can set the stage for greater government accountability, including
democratic change.

In either circumstance, financial market development can be used as a “cheap”
policy tool for a variety of socio-political conditions. In other words, modifications to
domestic policy that support and enhance financial markets may be an easier sell to
both government elites and the broader population than more contentious income
redistribution or large-scale infrastructure projects. By alleviating poverty and inequality
through financial market development, potential conflicts over resources may be
avoided. This could improve security conditions in nations with a divisive population and
a weak central government that would otherwise be prone to civil conflict. Improving the
allocation of resources to the best projects, rather than the best-connected projects,
may also eliminate a source of grievance for some groups. Financial market
development may also provide a solid base for other societal institutions (such as civic
groups and cooperatives) that provide a platform for democratic learning and cooperation among members of a population.

Finally, financial market development may help protect a nation from the volatility associated with global financial flows by creating markets that are more local in nature and by providing additional layers in the financial market system to absorb these shocks. Strong local markets provide more stable sources of domestic finance and can insulate against global capital flows. With a higher number of market participants, risk is more diversified, which can lower the cost of credit resulting in economic growth. As financial depth increases, risk mitigation and hedging are also easier because there is a wider variety of tools to work with. Thus, volatility in the system is easier to manage and the risk of financial crisis is lessened.

So how might states and international actors accomplish the goal of financial market development? There are several possible areas of focus for policy makers, but these are not mutually exclusive. Most obviously, improving the legal institutions can foster financial market development. In particular, legal specification and enforcement of contract law, bankruptcy law and shareholder rights are essential. In emerging markets (and even in mature ones) some of the participants underestimate the risk involved with complex financial products, and miscalculate prices leading to higher volatility than should actually be seen. As an example, think of the global problems that resulted from the sub-prime loan securities in the United States. Without regulation, these problems can go unchecked, and lead to broader financial problems or even crisis. Regardless of development level, most financial crises occur because of a lack of government oversight, not an excess of intervention. A good regulatory environment
is critical for deep financial market development and to ensure that financial market system is not built on speculation. Finally, all of these institutions need to foster trust in the financial market system if the beneficial effects of markets are to be realized.

It’s easy to write this list of necessary policies, but like most political actions, implementing these policies is far more difficult than defining them. Many of the suggested changes, such as greater contract enforcement, require a major overhaul of the court system, and eliminating corrupt practices and individuals may take decades. Without being naïve of these difficulties, policy makers can still begin the implementation process and at least set nations of the road to improved financial markets, and ultimately to greater levels of development.

Potential Areas for Policy Focus

Regulation serves four major purposes in an economy: it promotes competition, prevents monopolistic/oligopolistic industries from forming, promotes safety and protects consumers, and helps to ensure access to capital. All of these are needed for markets to allocate resources in the most efficient manner. Consumer protection and safety, along with credit access also serves a social function, and provides protection for the population of a country. In some cases, state intervention and regulation for social objectives (such as subsidized down payments for low income and first time homebuyers or requirements that banks allocate a certain portion of the loan portfolio to disadvantaged groups) serve both an economic and social function. Greater portions of the population can participate in the market, and the benefits are distributed throughout society, bringing broader economic development. Thus, the social objectives of regulation can reinforce economic goals (Stiglitz 2005).
Deposit insurance is a way for governments to support the development of the financial market system by increasing trust in the banking system for potential investors. However, this assumes that the government itself is deemed trustworthy. In addition, deposit guarantees may encourage moral hazard by banks (World Bank 2001), and undermine the supervisory function of the markets.

Both the domestic and international community should support grassroots efforts for financial development, as the case from Russia demonstrates. The recent emphasis on microfinance and its effects are another example of how financial development can positively affect development.

These examples provide a small overview of some possible policy options. Future research is likely to demonstrate an even greater wealth of possibilities.

Future Research

As is often the case, this research has brought up more questions than it has answered, and suggested many topics for future research. Perhaps most obviously, the question of financial and economic liberalization is an area that needs to be explored in the context of political development. There is a great deal of economic literature that explores the effects of liberalization and sequencing of reforms on economic growth. However, this discussion often leaves out the critical political element. Given that financial market development may foster both economic and political development, and that it may also provide a form of insulation from global economic volatility, then it makes sense to develop policies that promote financial market growth. But we also need to examine the economic literature on liberalization, and determine how liberalization might affect the relationship between financial market development and
political and economic development. Further, future research could attempt to
determine when national markets are sufficiently developed and when liberalization,
with its accompanying exposure to global volatility, may be safely attempted. This might
allow nations to minimize the risks of international capital flows, while realizing the
benefits of global integration.

The institutional requirements of financial market development also lead directly
into questions concerning the regulation of markets. In particular, we should examine
the particular types of regulation and the type of system (bank-based or equity based)
that appear to have the greatest effects. Some researchers are beginning to examine
the role of regulation (see, for example, Stiglitz 1999, 2005) but more precise studies
and greater detail about financial market regulation are required in order to develop
effective policies. Further research is also required on the political feasibility of both
liberalization and regulation. There is much focus on economic outcomes, perhaps
because of data availability, but more work needs to be done to increase our
understanding of the implementation process.

On a more macro scale, the international financial architecture needs to be
examined, particularly in the area of financial interdependence. For example, contagion
is not well-understood, and the Asian financial crisis demonstrated that the effects of a
crisis are not limited to the economic sphere. There are also issues that relate to trust in
banking and other financial services. Future research also needs to examine how trust
in financial systems is built, what types of policies promote that trust, and the short and
long term consequences if that trust is breached.
If my theory is correct, we should see better financial market development in nations where the state is more actively involved in the development of financial market institutions, and states with better financial market development should have higher levels of economic and political development. By extension, they should be less susceptible to crises from external shocks. This proposition should be empirically tested to further refine our understanding of state intervention, and to fine tune any policies related to development. On a related note, state support for financial markets needs to be carefully examined to determine which state activities are most strongly associated with financial market development. Some work has been done with regard to legal systems and financial markets (for example, Pinheiro 2001), but this area of research needs development and should be expanded beyond basic legal structures. There is also some debate about stock/equity based financial market systems versus bank-based models, and whether foreign or domestic capital is more conducive for financial market development (Rajan and Zingales 2003). This subject also needs to be studied in greater detail, with an emphasis on the political and economic results.

Finally, these analyses should be conducted using a variety of development indicators to ensure that the results are sound. One possibility is the use of the Human Development Indicators as a dependent variable. This measure, collected by the UN, attempts to determine the overall quality of life in a nation by looking at a variety of economic and social indicators. Other measures of grassroots activities, such as the development of homeowners associations in China, should be examined as local-level indicators of democratic learning and financial development.
Shifting the Development Paradigm

Many view finance with suspicion, and associate it with wealthy elites, undeserved earnings and global destabilization. This research shows just how undeserved this stereotype is, and how financial institutions can positively affect the broader population. In addition, this may explain in part why many of the neoliberal policies were not as effective as policymakers would have hoped. By ignoring the institutional foundations of a nation, neoliberals failed to address some of the underlying causes of the problems. Liberalization in effect became a band-aid for economic and political cancers.

Even as scholars are beginning to recognize the importance of financial market institutions (Stiglitz 2005), international financial institutions continue to promote economic liberalization as a prescription for both economic development and financial market development (IMF 2007). Financial markets serve the same general purposes in all societies. However, the mechanisms in which they work are fundamentally different at different development phases. In many cases, financial market development requires greater state activity and regulation. Given this evidence, the neo-liberal insistence on deregulation and liberalization is not only ineffective, it may actually be counter-productive for emerging market nations. It is for this reason that universal policy prescriptions such as liberalization-no matter how tantalizing their simplicity-are unlikely to achieve their development goals in all circumstances.

Policy makers need to shift from thinking of the state as an incompetent hindrance to considering it and helping promote it into a capable, proactive force for development. Stiglitz notes that almost all successful development programs provide
an important role for the state (1993, 347). While certain checks on the state should exist, and the markets should be used to allocate resources whenever possible, the state should be considered as a partner in any development program. The state is likely to be better at providing incentives for market development than at direct management of economic activities, and the construction of incentives for good market development should be the focus of policy efforts. In the end, greater economic and political development is the goal for both markets and states. Democracy and political development are healthy for business in the long run; it is the ultimate form of investor protection.

This research project has yielded findings that inform the debate on global development. We can take three main lessons from this research. First, financial market development does have an impact on political and economic development. Greater financial market depth can encourage economic growth, reduce poverty and increase equality. It can also increase the level of political competition and increase the effectiveness of government. In some cases, an improvement in financial market development results in an improvement in political rights and civil liberties. These results indicate that a greater focus needs to be placed on the role of financial markets not just as a tool for economic growth, but as a more direct player in the political development of a nation.

Next, the results suggest that financial markets affect nations in different ways depending on their level of development. Financial market development disproportionately benefits lower income nations, and the effects taper off as a nation becomes more politically and economically developed. Even as substantial as these
results are, there are a few notable exceptions. The Middle East still has a relatively low level of political development in spite of its high levels of financial development, and Latin America is more democratically advanced than its financial market development would suggest. Yet these exceptions should not detract from the overall picture; financial market development provides a piece to the puzzle and can help us to understand the complex mechanisms of development.

Finally, these results translate into actionable policy suggestions. Reforming a system is never as easy or as clean as it appears on paper, but financial market development may represent a “cheap” policy tool that is non-threatening to elites, and generates benefits that affect the broader population.

The Washington Consensus is not completely irrelevant, but fostering development is more complicated than just “stabilize, liberalize, and privatize.” Scholars and policy makers can no longer afford to treat economic policy and political reality as two separate entities. They are inextricably tied, and if we want to foster development that truly encompasses the goals of an overall improvement in the quality of life for a nation, then policy makers need to develop policies that work within both realms. The state must have a greater role than is suggested by the neoliberal paradigm, and we must stop viewing the state as a hindrance to development and instead treat it as an equal partner. The role of the state changes as a nation develops, from developing institutions that support market functions to a regulatory and supervisory role once those institutions are fully developed.

Given the evidence in this study, the role of financial markets in development is too substantial to be ignored. Yet the research begets many more questions than it
answers, and suggests a strong research agenda focused on the specific mechanisms of various types of financial market institutions, and calls for better data in various areas of political development. In the broadest sense, this research points out a new avenue for development research, and suggests that policy makers look outside the current neoliberal paradigm for answers to the development puzzle. North says that the new political economy is focused on “how and why the political system designs the economy in particular ways.” (North 2000). I say political economy needs consider the other direction of causality, and examine how finance and economics shape the political system within a nation.
APPENDIX A

INCOME CLASSIFICATION
<table>
<thead>
<tr>
<th>Income</th>
<th>Frequency</th>
<th>Percentage</th>
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<tr>
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<tr>
<td>3. Upper Middle Income (35 countries)</td>
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<tr>
<td>4. High Income (42 countries)</td>
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</tr>
<tr>
<td>Total (190 countries)</td>
<td>5795</td>
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</table>

**Low Income**

Afghanistan  
Brunei Darussalam  
Chad  
Ethiopia  
Haiti  
Laos  
Mali  
Myanmar (Burma)  
Pakistan  
Senegal  
Tajikistan  
Vietnam

**Lower Middle Income**

Albania  
Bolivia  
Cape Verde  
Djibouti  
Fiji  
Indonesia  
Kazakhstan  
Moldova  
Peru  
Syria  
Tuvalu

Low Income  
Angola  
Burkina Faso  
Comoros  
Gambia  
India  
Liberia  
Mauritania  
Nauru  
Palau  
Sierra Leone  
Tanzania  
Yemen

Low Middle Income  
Bangladesh  
Burundi  
Congo Kinshasa  
Ghana  
Kenya  
Madagascar  
Mexico  
Nepal  
P. New Guinea  
Solomon Islands  
Togo  
Zambia

Benin  
Cambodia  
Cote d'Ivoire  
Guinea  
Korea (North)  
Malawi  
Mongolia  
Niger  
Rwanda  
Somalia  
Uganda  
Zimbabwe

Bhutan  
Eritrea  
Guinea-Bissau  
Kyrgyzstan  
Maldives  
Mozambique  
Nigeria  
Sao Tome  
Sudan  
Uzbekistan

<table>
<thead>
<tr>
<th>Income</th>
<th>Frequency</th>
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<td>Comoros</td>
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<tr>
<td>Gambia</td>
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<td>22.81</td>
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<tr>
<td>Afghanistan</td>
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<tr>
<td>Gambia</td>
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<td>22.81</td>
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<td>Total (190 countries)</td>
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### Upper Middle Income

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### High Income

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<td>Japan</td>
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<tr>
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APPENDIX B

REGIONAL CLASSIFICATION
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<tr>
<th>Region</th>
<th>Frequency</th>
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<td>1. North America (2 countries)</td>
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<tr>
<td>3. Western Europe (25 countries)</td>
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<td>12.84</td>
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<tr>
<td>4. Eastern Europe, Russian and Central Asia (26 countries)</td>
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<td>8.9</td>
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<tr>
<td>5. Middle East and North Africa (19 countries)</td>
<td>635</td>
<td>10.96</td>
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<tr>
<td>6. Sub-Saharan Africa (47 countries)</td>
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<td>7. East Asia and the Pacific (30 countries)</td>
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<td>8. South Asia (8 countries)</td>
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<tr>
<td><strong>Total (190 countries)</strong></td>
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**Region 1 - North America**

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**Region 2 - Latin America and the Caribbean**

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**Region 4 - Eastern Europe, Russia and Central Asia**

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### Region 5 - Middle East and North Africa

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### Region 6 - Sub-Saharan Africa

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222
**Principle Factors**

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**Factor Loadings**

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<td>-0.017</td>
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**Varimax Rotation**

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<td>-0.332</td>
<td>-0.276</td>
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<td>0.118</td>
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APPENDIX D

CODEBOOK FOR VARIABLES
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<td>code</td>
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</tr>
<tr>
<td>year</td>
<td>year of data</td>
</tr>
<tr>
<td>refno</td>
<td>reference number of country</td>
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<td>FDI</td>
<td>Foreign direct investment, net inflows as a % of GDP. Source: World Development Indicators</td>
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<tr>
<td>gdpgrow</td>
<td>GDP growth (annual %) Source: World Development Indicators</td>
</tr>
<tr>
<td>gini</td>
<td>GINI index Source: World Development Indicators</td>
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<tr>
<td>inflation</td>
<td>Inflation, consumer prices (annual %) Source: World Development Indicators</td>
</tr>
<tr>
<td>debtln</td>
<td>National debt as a percentage of GDP. Source: World Development Indicators</td>
</tr>
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<td>popln</td>
<td>Population, natural log of total. Source: World Development Indicators</td>
</tr>
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<td>poverty</td>
<td>Poverty headcount ratio at $2 a day (PPP) (% of population) Source: World Development Indicators</td>
</tr>
<tr>
<td>tertiary</td>
<td>School enrollment, tertiary (% gross) Source: World Development Indicators</td>
</tr>
<tr>
<td>trade</td>
<td>Trade (total volume as a % of GDP) Source: World Development Indicators</td>
</tr>
<tr>
<td>region</td>
<td>World Bank regional classification code</td>
</tr>
<tr>
<td>income</td>
<td>World Bank income classification code</td>
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<tr>
<td>FH</td>
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</tr>
<tr>
<td>vanhanen</td>
<td>Vanhanen standardized scale 100 pts (Vanhanen 2000)</td>
</tr>
<tr>
<td>polity</td>
<td>Polity standardized scale 100 pts (Polity IV 2003)</td>
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<td>vancomp</td>
<td>Vanhanen Competition (% seats largest party) (Vanhanen 2000)</td>
</tr>
<tr>
<td>participation</td>
<td>Vanhanen Participation (electoral turnout) (Vanhanen 2000)</td>
</tr>
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<td>polcomp</td>
<td>Political competition (ParReg+ParComp), 1800-2003 (Polity IV 2003)</td>
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<td>gdppc</td>
<td>GDP per capita (constant 2000 US$) (World Bank, WDI 2005)</td>
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<tr>
<td>APC</td>
<td>Private credit by deposit money banks and other financial institutions to GDP calculated using the following deflation method: ( \frac{0.5 \times (F_t / P_{et} + F_{t-1} / P_{et-1})}{GDP_t / P_{at}} ) where ( F ) is credit to the private sector, ( P_{et} ) is end-of-period CPI, and ( P_{at} ) is average annual CPI</td>
</tr>
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<td>Effectiveness</td>
<td>Government Effectiveness. Note: Data are from 96, 98, 00, and 02. Source: Governance Indicators. Values for missing years are linearly interpolated.</td>
</tr>
<tr>
<td>Regulation</td>
<td>Regulatory Quality. Note: Data are from 96, 98, 00, and 02. Source: Governance Indicators. Values for missing years are linearly interpolated</td>
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<td>Corruption</td>
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APPENDIX E

DIAGNOSTIC TEST RESULTS
### Autocorrelation Tests

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* Null hypothesis indicates there is no autocorrelation

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* Null hypothesis indicates there is no autocorrelation
### Pooling Tests

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* A rejection of the null indicates that pooling is not appropriate.

### Hausman Tests

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APPENDIX F

STATIONARITY TEST RESULT
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<td>1205.499</td>
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<td>219.709</td>
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<td>156.039</td>
<td>0.617</td>
<td>201.552</td>
<td>0.006</td>
<td>114.491</td>
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* The null hypothesis indicates the presence of a unit root in at least one series.
APPENDIX G

COMPLETE RESULTS OF ANALYSIS
## Blundell-Bond Regression Results on GDP Per Capita Growth

<table>
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<tr>
<th>Variable</th>
<th>Concurrent</th>
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<th>10 years</th>
<th>15 years</th>
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</thead>
<tbody>
<tr>
<td>Lagged GDP per capita</td>
<td>0.262***</td>
<td>0.283***</td>
<td>0.292***</td>
<td>0.283***</td>
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<td>(0.04)</td>
<td>(0.04)</td>
<td>(0.04)</td>
<td>(0.04)</td>
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<td>Private Credit (% of GDP)</td>
<td>-234.9</td>
<td>86.98</td>
<td>58.44</td>
<td>322</td>
</tr>
<tr>
<td></td>
<td>(153.00)</td>
<td>(131.00)</td>
<td>(175.00)</td>
<td>(203.00)</td>
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<tr>
<td>Polity</td>
<td>1.347***</td>
<td>1.339***</td>
<td>1.004***</td>
<td>0.934**</td>
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<tr>
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<td>(0.36)</td>
<td>(0.39)</td>
<td>(0.38)</td>
<td>(0.42)</td>
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<td>0.912*</td>
<td>0.829*</td>
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<td>(0.42)</td>
<td>(0.47)</td>
<td>(0.49)</td>
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<td>Population</td>
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<td>8.597</td>
<td>8.615</td>
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<td>(228.00)</td>
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<table>
<thead>
<tr>
<th>Standard errors in parentheses</th>
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<th>Groups</th>
<th>Chi-Squared</th>
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<td>530</td>
<td>89</td>
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</tr>
<tr>
<td>486</td>
<td>86</td>
<td>109.7</td>
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<tr>
<td>454</td>
<td>81</td>
<td>93.25</td>
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<tr>
<td>438</td>
<td>79</td>
<td>88.92</td>
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## Blundell-Bond Regression Results on Overall GDP Growth

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<td>Lagged Overall GDP Growth</td>
<td>0.107***</td>
<td>0.0835**</td>
<td>0.0710*</td>
<td>0.0937**</td>
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<td>Private Credit (% of GDP)</td>
<td>-5.742*</td>
<td>(3.10)</td>
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<td>Private Credit (5 year lag)</td>
<td>0.261</td>
<td>(2.55)</td>
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<td>Private Credit (10 year lag)</td>
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<td>(3.21)</td>
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<td>Private Credit (15 year lag)</td>
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<td>(3.60)</td>
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<td>-0.000894**</td>
<td>-0.000849**</td>
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<td>Debt</td>
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<td>-0.448*</td>
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<th>486</th>
<th>454</th>
<th>438</th>
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<tr>
<td>Groups</td>
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<td>86</td>
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<td>Chi-Squared</td>
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*Standard errors in parentheses*

*** p<0.01, ** p<0.05, * p<0.1
### Blundell-Bond Regression Results on Tertiary Enrollment

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<td>Private Credit (10 year lag)</td>
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<td>Private Credit (15 year lag)</td>
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<tr>
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<td>0.00285</td>
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<td>(0.01)</td>
</tr>
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*Observations: 124, 117, 100, 111
*Groups: 52, 51, 43, 45
*Chi-Squared: 3592, 4732, 3911, 3565

*Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1
### Blundell-Bond Regression Results on Poverty Levels

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<th>15 years</th>
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<td>0.970***</td>
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<td>(0.01)</td>
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<td>(0.01)</td>
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<td>Private Credit (% of GDP)</td>
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</tr>
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<td>(1.56)</td>
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<td>Private Credit (15 year lag)</td>
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<td>(0.003)</td>
<td>(0.005)</td>
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<td>(0.005)</td>
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<td>-0.001***</td>
<td>-0.001***</td>
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<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
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<td>(0.002)</td>
<td>(0.004)</td>
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<td>(0.003)</td>
<td>(0.003)</td>
<td>(0.005)</td>
</tr>
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<td>-0.001*</td>
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<td>(0.027)</td>
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<td>(0.100)</td>
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<td>(2.040)</td>
<td>(1.680)</td>
<td>(1.790)</td>
<td>(2.310)</td>
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Observations: 264 229 208 200

Groups: 45 43 40 37

Chi-Squared: 51401 78372 68010 26602

*Standard errors in parentheses*

*** p<0.01, ** p<0.05, * p<0.1
### Blundell-Bond Regression Results on Income Inequality

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Observations: 237  205  189  183  
Groups: 42  40  37  35  
Chi-Squared: 10131  8318  7234  7612

**Standard errors in parentheses**  
*** p<0.01, ** p<0.05, * p<0.1
**Blundell-Bond Regression Results on Participation**

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*Standard errors in parentheses*

*** p<0.01, ** p<0.05, * p<0.1
Blundell-Bond Regression Results on Corruption

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*Standard errors in parentheses*

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## Blundell-Bond Regression Results on Competition (Vanhanen)

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*Standard errors in parentheses*

*** p<0.01, ** p<0.05, * p<0.1
### Blundell-Bond Regression Results on Competition (Polity)

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*Standard errors in parentheses*

*** p<0.01, ** p<0.05, * p<0.1
## Blundell-Bond Regression Results on Democracy (Vanhanen)

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*Standard errors in parentheses*

*** p<0.01, ** p<0.05, * p<0.1
### Blundell-Bond Regression Results on Democracy (Polity)

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<td>0.002***</td>
<td>0.003***</td>
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*Standard errors in parentheses*

*** p<0.01, ** p<0.05, * p<0.1
### Blundell-Bond Regression Results on Democracy (Freedom House)

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<td>0.893***</td>
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<td>0.905***</td>
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<td>-0.043**</td>
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<tr>
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Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
### Blundell-Bond Regression Results on Effectiveness

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<td>Lagged Effectiveness</td>
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<td>0.953***</td>
<td>0.938***</td>
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<td>Private Credit (% of GDP)</td>
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<td>-0.003***</td>
<td>-0.006***</td>
<td>-0.004***</td>
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<td>0.000</td>
<td>0.000</td>
<td>-0.001**</td>
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**Observations:** 239 224 210 211  
**Groups:** 5752 5342 5060 5915  
**Chi-Squared:** 70 68 65 62

*Standard errors in parentheses*

*** p<0.01, ** p<0.05, * p<0.1
### Blundell-Bond Regression Results on Regulation

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<td>-0.002*</td>
<td>-0.005***</td>
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<td>(0.00)</td>
<td>(0.00)</td>
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<td>0.001**</td>
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**Observations**: 239 224 210 211  
**Groups**: 70 68 65 62  
**Chi-Squared**: 5299 4998 3704 4168

*Standard errors in parentheses*  
*** $p<0.01$, ** $p<0.05$, * $p<0.1$


